

REPORT OF THE PROCEEDINGS

OF THE

Northumberland and Durham

MEDICAL SOCIETY.

SESSION 1885-86.

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—
1885,

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The Medical Officers of Her Majesty's Forces in the District.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

SESSION 1885-86.

ANNUAL MEETING.

THE ANNUAL MEETING was held in the Library of the Newcastle-on-Tyne Infirmary, on Thursday, September 24th, 1885—the President (Dr. Fielden) in the chair.

The following gentleman was proposed for election :—

George Taylor, M.B., Aberd., Lyons Terrace, Hetton-le-Hole.

The officers were unanimously re-elected on the motion of Dr. PURDIE, seconded by Dr. HOUSEMAN.

The SECRETARY read the following report :—

REPORT OF THE COMMITTEE FOR 1884-85.

Your Committee have great pleasure in presenting once more a report of a highly satisfactory character.

Since the last Annual Meeting 18 new members have been elected ; 3 have died (viz., Drs. Hutchison, Bowman, and Lynn) ; 2 have resigned ; and 7 have been struck off for non-payment of subscriptions, the total number on the list being at present 176.

The income during the year, including a balance brought forward of £73 16s. 11d., was £157 6s. 11d. The expenditure was £71 4s. 8d., leaving a balance in the hands of the Treasurer of £86 2s. 3d. The unpaid subscriptions amount to £23 10s.

Acting in accordance with Rule 12, your Committee have decided, as the balance is large, to expend a sum not exceeding £40 upon the publication of a catalogue of the Infirmary Library, which has been prepared by Mr. Dodd, the Librarian. Each member will receive a copy.

Your Committee, whilst recognising the great usefulness of the special discussions held during the past two years, think it advisable to omit them for the ensuing session, and to devote the time of the meetings to the exhibition of specimens and patients and the reading of papers.

As the dinner by which the past session was inaugurated proved successful, it has been decided to repeat the experiment.

At the invitation of the President and members of the South Durham and Cleveland Medical Society, the conjoint excursion was held in the neighbourhood of Staindrop.

On the motion of the PRESIDENT, seconded by Dr. LYONS, the report was unanimously adopted.

The following resolution, moved by Dr. ADAMSON, and seconded by Dr. S. W. BROADBENT, was carried unanimously :—"That the words, mutual inter-communication respecting the prevalent diseases of the district, in Rule 2, be rescinded."

Dr. DRUMMOND moved : "That a Joint Honorary Secretary be appointed." This was seconded by Dr. GOWANS and carried unanimously.

After some discussion, the PRESIDENT ruled that the appointment of Joint Honorary Secretary should take place at the October ordinary meeting of the Society.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

SESSION 1885-86.

OCTOBER MEETING.

THE FIRST MONTHLY MEETING of the Society was held in the Library of the Newcastle-on-Tyne Infirmary, on Thursday, October 8th.—Dr. Fielden, President, in the chair.

NEW MEMBER.

George Taylor, M.B., Aberd., Hetton-le-Hole, co. Durham, was unanimously admitted a member of the Society.

APPOINTMENT OF HON. JOINT SECRETARY.

In accordance with the alteration made in Rule 6 at the Annual Meeting, James D. Farquharson, M.B., C.M., Glasg., 242, Westgate Road, Newcastle-on-Tyne, was, on the motion of Dr. Fielden, unanimously elected Hon. Joint Secretary of the Society.

PATHOLOGICAL COMMITTEE.

The following gentlemen were added to the Pathological Committee:—Dr. Squance, Sunderland; Dr. Limont and Dr. Beatley, Newcastle-on-Tyne.

CASE OF CYSTIC ADENOMA OF BREAST.

Dr. GOWANS showed a patient from whom he had removed an enormous adenoma of the breast. The right side of patient's chest showed a large crater-like depression, 8 inches in diameter, occupying the position of the breast, and extending obliquely outwards into the axilla. Dr. Gowans exhibited the tumour, which was of immense size, and said :

This tumour had been growing for nine years, and had at first given rise to no symptoms, except the inconvenience arising from its great weight and size, but latterly caused very severe pain. Many of the cysts had a network of vessels over them—a fact which gave rise to a suspicion that the growth might be sarcomatous—an opinion not shared in by myself, since the tumour was freely movable and none of the neighbouring glands were affected. The operation presented no great difficulties, an incision 15 inches long being made, and the growth (taking

care to leave uninjured the subcutaneous cellular tissue covering it) entirely removed. The edges of the flaps were pared and brought together with sutures, and the woman made an excellent recovery.

Several members having congratulated the operator on the result, Mr. Page remarked that the case was very like an interesting one described and figured in "Bell's Surgery."

The accompanying illustration is from a photograph by Aynsley, of South Shields.

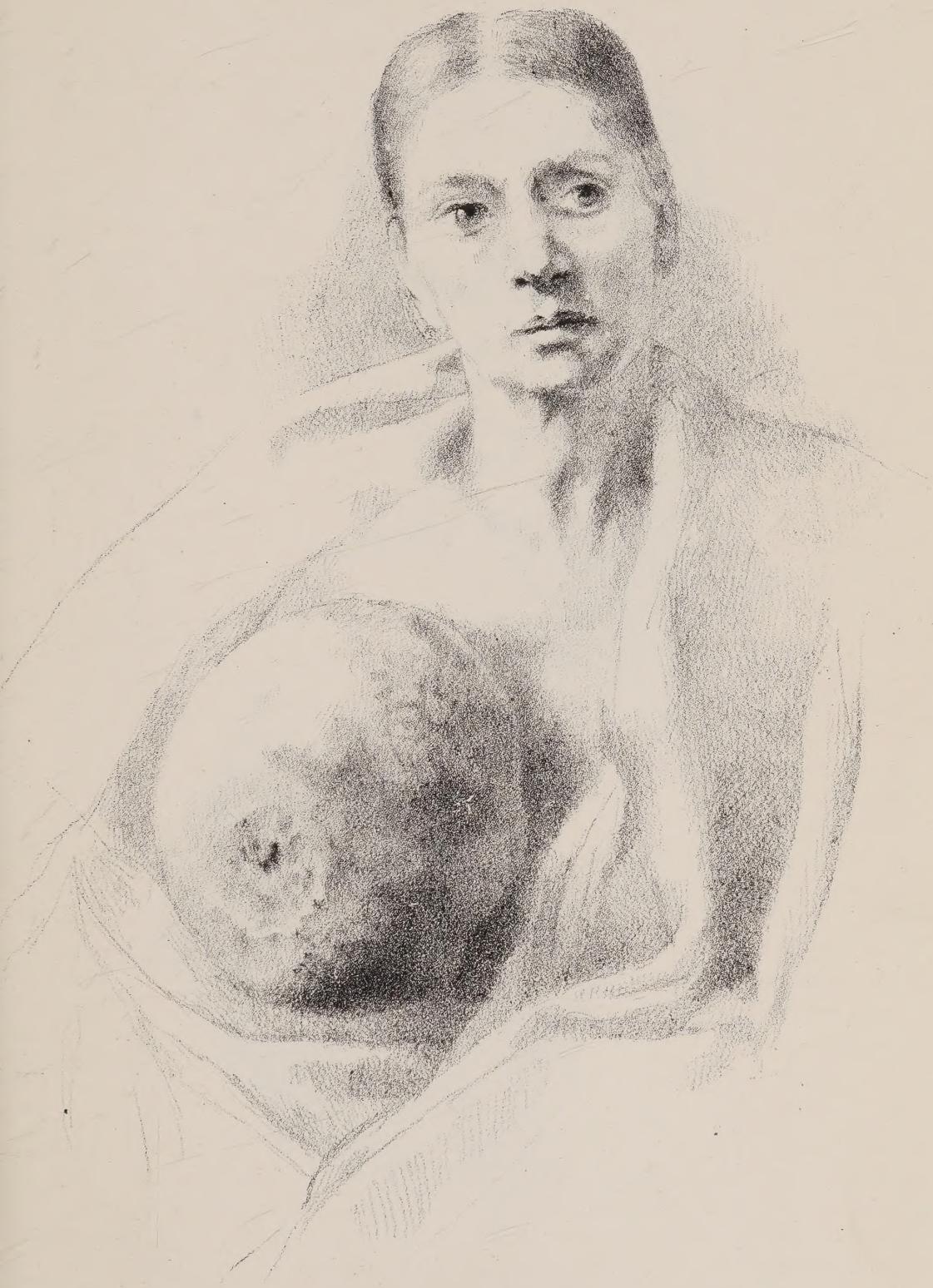
Dr. GOWANS also exhibited and made remarks upon a series of tumours, including a large one, which had a history of 13 years, and was presumed to be originally fatty; but there had also been implication of skin and of the glands of late. Dr. Gowans believed the tumour to be at first fatty, with subsequent malignant implication of skin and glands. Dr. Hume suggested that it should be examined by the pathological committee to find out what it really was.

CANCER OF THE TONGUE.

Dr. GOWANS exhibited an entire tongue and submaxillary gland removed for cancer.

The patient was admitted to the Ingham Infirmary with a swelling and ulceration of the left side of his tongue and floor of the mouth, of three months' standing. He was a big flabby man, with a weak heart, and not a favourable subject for operation. The case was fairly presented to him, and he concluded to submit to extirpation as affording him the best chance. Bilroth's operation was the one adopted. The patient was put under the influence of chloroform, and making an incision below the lower jaw, I ligatured the lingual arteries. A ligature being passed through the tongue, it was drawn out and severed from its attachments by a series of little snips with a pair of scissors. No blood to speak of was lost during the operation, and the patient was so little affected that he wanted to walk back to his ward. I have to acknowledge the able assistance I received from Drs. Murphy and Drummond and my colleagues at the operation.

Dr. MURPHY said the great question in this case was "How to operate?" London men would say the ecræseur; but that necessitated splitting the jaw. Symes' operation was now seldom employed, and practically the choice was between Bilroth and Whitehead's operations. These were very much the same, but the former required that the linguals should be tied in the first place, and that was a necessity which every operator could not fulfil with equal dexterity. He cited a case in which death had resulted from secondary haemorrhage, from a ligature lingual, after Bilroth's



DR. GOWAN'S CASE OF CYSTIC ADENOMA OF THE BREAST.



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operation, and contended that Whitehead's method was as successful in results, and much more easily carried out than the German operation. Dr. Murphy referred to an accident, which occurred in this case, by the slipping of the gag, the operator's finger being caught and severely crushed between the patient's teeth, and urged that in all cases in which the gag had to be employed, an assistant should be told off to keep it *in situ*, as no instrument with which he was acquainted would remain in position of itself.

LIGATION OF THE EXTERNAL ILIAC FOR TRAUMATIC ANEURISM OF COMMON FEMORAL.

Mr. PAGE showed a patient whose external iliac artery had been successfully ligatured for traumatic aneurism of the common femoral, and said:—James Costigan, aged 20 years, a healthy labouring man, was admitted into the Newcastle Infirmary under my care, in May, 1885, suffering from an aneurism of the right common femoral artery. The limb was much wasted; patient complained of pain in his calf and consequent inability to use the leg. The aneurism, about the size of a hen's egg, was evidently encysted. This plaster cast, for which I am indebted to Mr. Brewis, my clinical clerk, shows very well the size and precise situation of the aneurism. In June, 1884, while training with the militia at Alnwick, Costigan was accidentally stabbed by a comrade with a bayonet. At the time of the accident his right foot was placed upon a bed, and he was stooping in the act of brushing his boot. The bayonet entered the thigh an inch-and-a-half or so below the anterior superior spine of the ilium, in the direction of the femoral vessels. But little bleeding followed, and after four weeks' rest in hospital, under the care of Dr. Wilson, of Alnwick, the man was discharged. Three months after receiving the wound severe pain suddenly came on in the right calf while walking, from which he had never since been free while moving about, though he had none while in the horizontal position. He first noticed a pulsating tumour in his groin at this time. On June 10th, the external iliac artery was tied with a stout cat-gut ligature. The wound healed readily, and in July the patient was discharged cured. The origin of the aneurism is an interesting feature in the case. It is unlikely that the vessel was really opened by the bayonet thrust. One would have expected more bleeding, and the immediate formation of a false aneurism if all the coats of the vessel had been punctured, but it cannot be denied that a wound in an artery may heal. John Bell, in his classic lectures on surgery, mentions a case of wounded artery which was successfully treated 120 years ago in Newcastle-upon-Tyne, by Mr Lambert, to whose energy the public is indebted for this Infirmary. Mr. Lambert carefully closed the wound with a hare-

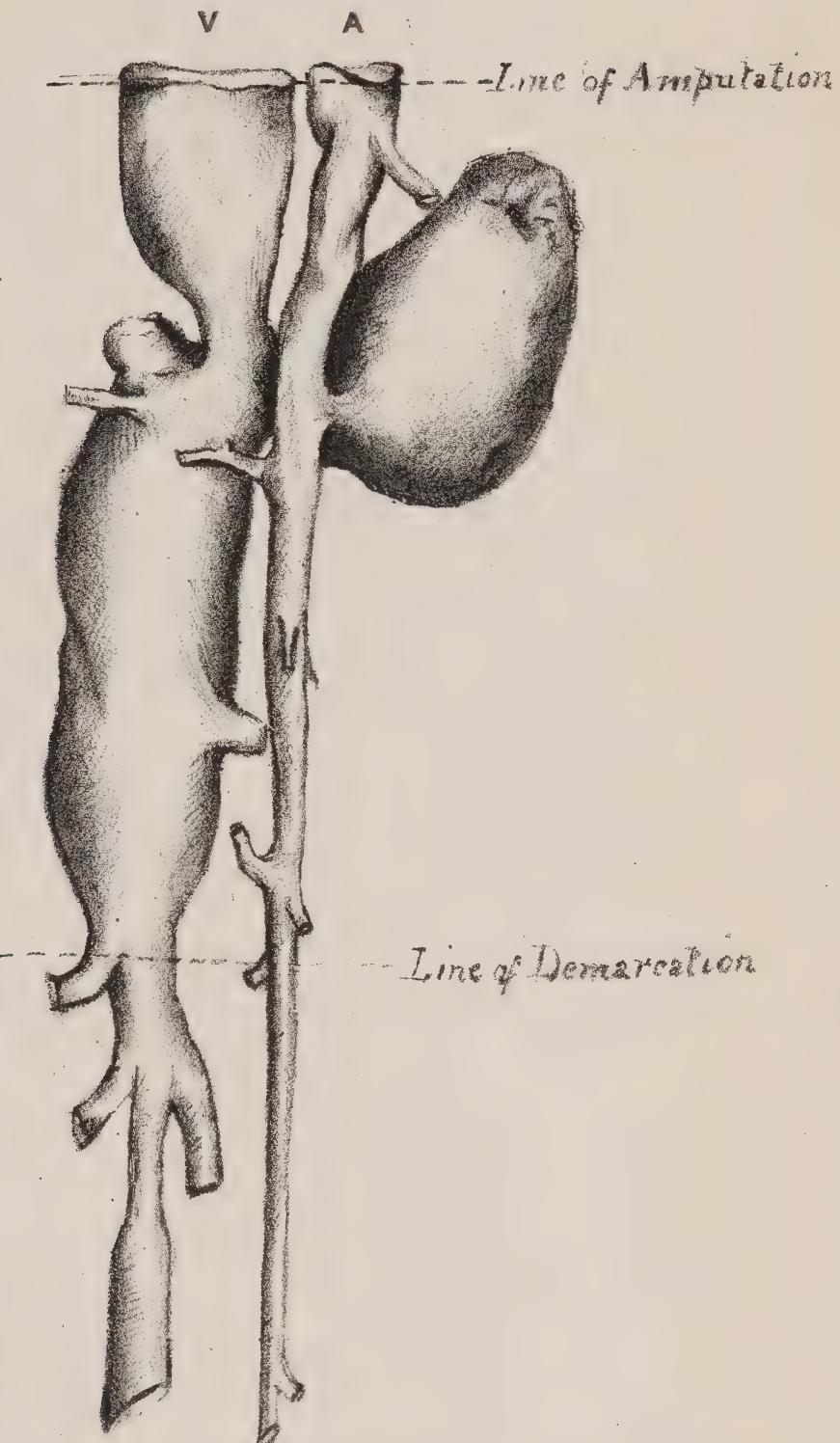
lip suture, and it healed. The same method of treatment was adopted some time after by Mr. Bell, in Edinburgh, but the vessel had to be tied on account of haemorrhage. It may be within your recollection, sir, that, when last session I showed together two men cured of idiopathic popliteal aneurism, I took occasion to remark on the rarity of ligature of the femoral artery in this institution. It is a little curious that, within the short space of six months, it should have fallen to my lot to tie the femoral artery three times, and the external iliac once, for an aneurism. My colleagues, Dr. Arnison and Dr. Hume, have also recently tied the femoral for aneurism.

CASE OF POPLITEAL VARICOSE ANEURISM.

Mr. PAGE showed a dissected specimen of varicose aneurism of the popliteal artery and vein, and said :—This rare and valuable preparation has been dissected by Mr. W. Baigent, from a limb which I recently had occasion to amputate in this institution. It is a specimen of what we seldom now have any opportunity of seeing—traumatic varicose aneurism. Twelve years ago a lad threw an open pocket knife at a companion 15 years of age. The blade entered the lower part of the right thigh, on the inner side, in a downward direction, wounding the popliteal artery and vein. Profuse bleeding followed its removal. The wound healed, however, readily. From the time of the accident, patient was aware of a peculiar thrilling sensation whenever he put his hand over the seat of puncture. Later, pulsation could be felt and seen in the neighbourhood. A few weeks before admission the lower part of the thigh increased considerably in size, and became so painful that patient was unable to use the limb. He was, consequently, sent into the Infirmary under my care by Dr. James A. Angus, of this town. The details of the case have been given so well in the report I hold in my hand, that with your permission, sir, I will ask the members of the Society to glance through it. The illustrations are particularly good, and when I add this report is one of those sent in for the Goyder scholarship, by the first successful scholar (Mr. Baigent), I believe all will be sufficiently interested to pardon any irregularity I may be introducing. I may add I tied the femoral at the apex of Scarpa's triangle. Dry gangrene of the leg followed, for which his thigh was successfully amputated at the lower third.

Dr. MORGAN thought it would be better to have tied on both sides of the aneurism, in the first place, than to have resorted to the severe expedient of tying the femoral in Scarpa's triangle.

Dr. HUME pointed out, in support of Mr. Page's procedure, that the choice was rather between what Mr. Page had done in the first instance and what had ultimately to be done.



This lithograph, from a drawing by Mr. Baigent, is a very faithful representation of the specimen. **V** is the dilated popliteal vein; **A** the popliteal artery. The sac is not situated between the vessels, but to the arterial side. Both vessels open into it by separate openings. The dry gangrene of the leg extended to about one inch below the tubercle of the tibia, and as far as vitality was concerned, the limb might have been amputated at the seat of election.

STRICTURE OF URETHRA.—INTERNAL URETHROTOMY.

Dr. HUME exhibited the bladder and urethra from a patient who had died after, but, he wished to point out, not from internal urethrotomy.

On admission patient was suffering from retention, and as no catheter could be passed, and the symptoms were urgent, the house surgeon tapped per rectum and drew off the urine. The man had been previously treated for stricture, and when in hospital was a most troublesome patient to deal with. I passed the guide of Berkley Hill's urethrotome, and tied it in for 24 hours. At the end of that time I was able to pass the metal guide of the urethrotome, but withdrawing the instrument, proceeded to operate with the one I am in the habit of using, Sir Henry Thompson's modification of Civiale's urethrotome, and performed the internal operation in the usual way. A No. 27 French guage catheter was afterwards passed, and for a few days the man went on well; but after that he got out of bed against orders, and conducted himself in a disorderly manner. An attack of pleurisy and pericarditis supervened, from which the man died after five or six weeks' illness. I supposed that this was a case of pyæmic infection; but at the *post mortem* no trace of pyæmia was found, and the cause was, without doubt, attributable to the patient getting up and going about in the way he did. The point of interest in the case is that you have here a urethra exactly in the condition it would be in after the operation of internal urethrotomy, and if the members will examine the specimen they will see that no trace of the stricture remains visible. It is my usual habit to tie in a catheter for 48 hours after operation, and afterwards to pass an instrument every three or four days. But in this case, owing to the illness which supervened, I only passed a No. 8 catheter once, so that there has been no artificial dilatation to obliterate the remains of the stricture.

Dr. MORGAN was inclined to think that Dr. Hume overestimated the results to be obtained from internal urethrotomy. For his own part, he believed that in this case the total disappearance of the evidence of the stricture was due to the fact that the constriction was only a band across the passage. In such cases, of course, internal urethrotomy did all that was required, and did it most effectively.

SARCOMA OF LOWER JAW.

Dr. HUME exhibited a tumour which he had removed from the lower jaw of a patient in the Infirmary recently.

About ten months previous to admission a small swelling appeared on the lower jaw, just under a carious tooth. There was doubt, on admission, whether the swelling was not of a purely

inflammatory nature, and the decayed tooth was accordingly extracted. After that the swelling increased rapidly, and in a few days the matter was put beyond all doubt. The jaw on the affected side was removed from the symphises to beyond the angle. The point of interest lies in the minute anatomy of the specimen I lay before the Society. The tumour was so defined as to allow of the removal along with it of a portion of the surrounding tissues. The tumour itself was a large, round-celled sarcoma, growing from the periosteum; but on examining the surrounding tissue I found the perivascular spaces for a considerable distance from the original growth filled with sarcomatous cells. This specimen throws considerable light on the mode of recurrence of these growths. The cells apparently travel along the sides of the vessels to the neighbouring structures, which they infiltrate and destroy.

TWO CASES OF OVARIAN TUMOUR.

Dr. MORGAN exhibited two ovarian tumours lately removed by him at the Sunderland Infirmary, and said:—Every now and again we are brought face to face with cases of ovarian disease so apparently hopeless as to deter us from operative interference. The two cases which I submit to-night will, I hope, show that in even desperate cases we have something to hope for by abdominal section. At our meeting in February, 1884, that is during the session before last, I showed an ovarian cyst which had been removed in October, 1883—just two years ago. The case was described as one of a very unfavourable character. “The belly had reached an enormous size, making it difficult for the patient to lie, or sit, or stand; pain was constant, and often very severe. Legs and thighs were œdematosus; emaciation was extreme. There was dry hacking cough and large bedsores.” The diagnosis was a multilocular cyst with partially solid contents, possibly malignant, and much ascites. The operation showed this diagnosis to be correct; but notwithstanding the unpromising appearances, this woman made a good recovery. Under this microscope Dr. Squance has placed a section of this tumour, from which you see that it is an example of round-celled sarcoma.

This woman reported herself to me from time to time, and continued in perfect health, with regular periods, up to December, 1884. Then I found her complaining of loss of strength, constipation, sweats, and her periods had ceased to be regular. She continued to fail through the year, until June last, when I had the advantage of a consultation with my colleagues in the Infirmary. The belly had again enlarged to the size of five months' pregnancy. It appeared to be occupied by a solid mass, which was very immovable. Our diagnosis was a cystic sarcoma, with deep adhesents. The nature of the case was explained to her, and she

was told to come to the Infirmary should she feel herself getting worse, in order that she might have the almost desperate chance offered by operation and removal. On September 11th, she came to the Infirmary, was admitted, and kept under observation for a fortnight. Further examination strengthened the previous diagnosis; but it was then thought right to operate, as the patient herself dreaded falling into her former state of suffering. Accordingly the operation was performed—the anaesthetic, ether—the tumour was reached through an opening made at the former incision.

It was found to be chiefly solid, and universally adherent. It proved very difficult to extirpate breaking down under the hand, and some of the mass was left unremoved. The haemorrhage was free, and the patient sank shortly after the wound was closed.

Post mortem showed the mesenteric glands, as well as the liver, to be invaded, and that a portion of the growth had been left behind. There had been no bleeding into peritoneum. This broken down mass of cysts and solid substance is what was removed.

Dr. Squance will, with your permission, describe the sections he has most kindly prepared of this and also of the following case.

The second case presents some additional points of interest. The patient, Mrs. K., had for some time been suffering from abdominal enlargement, which had been taken for dropsy, and she had been twice tapped and a considerable quantity of fluid drawn off. On admission to the Sunderland Infirmary, the belly was very much enlarged, with fluctuation in some parts and dense unyielding feeling in right iliac region. An ovarian cystic tumour was diagnosed, with solid contents, the abdomen was opened, and this large cyst (with solid masses of sarcomatous matter) removed on September 17th.

The patient never had a bad symptom after the operation, and left the Infirmary in three weeks, and has since continued quite well.

Dr. SQUANCE said : The growth which was submitted to me for examination by Mr. Morgan is an adenoid proliferous cystic tumour, and consists of a large cyst, with several secondary cystic growths projecting not only into the interior, but also somewhat externally. These growths to the naked eye are almost entirely composed of cysts, varying in size from a pea to that of a small orange, and filled with fluid of varying colour and consistency—the fluid in the larger being clear and watery, while that contained in the smaller was thick and gelatinous, in some instances of a chocolate brown colour. Microscopically there is an external band of fibrous tissue, inside of which groups of "spongy tissue," surrounded by connective tissue, with many nuclei are situated. In the spongy tissue

are numerous small cavities, which are evidently commencing cysts. While still further to the interior of the growth numerous cavities lined with columnar epithelium are noticed, some of which contain colloidal material, and are being compressed by the more rapid development of others. From some of the cysts papillary out-growths are noticed, invading the surrounding fibrous tissue. The first ovarian cyst removed had sarcomatous tissue in its walls, interspersed with cysts; the second consisted almost entirely of solid sarcomatous material. In both cases the sarcoma was of the small round-celled variety, with some spindle-celled elements.

Dr. GOWANS referred to one or two practical points suggested by these cases. In a considerable percentage of cases, when a tumour has been removed from one ovary, it recurs in the other. He would make it a rule to examine carefully at the time of operation, and if any trace of disease were found in second ovary, to remove both; and if the first tumour should be sarcomatous, remove both ovaries, whether there is evidence of disease or not. Because a tumour is believed to be sarcomatous, was no reason, in his opinion, why the patient should not be given the chance of prolonged life offered by operation. Open the abdomen at least, and if the tumour is found infiltrating the surrounding tissues, leave it alone; and the patient is in no worse a condition, from the mere opening of the abdomen, than she was before, while the satisfaction remains that nothing has been taken for granted. He believed that many cases which were at present abandoned as hopeless, might be given a new lease of life by adopting this procedure.

DR. MURPHY believed that in many cases an exploratory incision was justified, but he would not have them believe that such a practice was free from danger. The Birmingham school might say there was no danger in an abdominal incision, but from his own experience he declined to accept that gospel. In regard to the removal of both ovaries, he quoted Sir Spencer Wells: "Examine other ovary, and if cyst found the size of a hen's egg, remove it; if not that size let it alone." In simple cystic disease he believed that to be sound advice; where, however, one had to deal with cystic sarcoma, the case would have to be taken on its merits.

PAROVARIAN CYST.

Mr. PAGE showed a specimen of ovarian disease and said: This beautiful specimen of ovarian disease was removed from a patient in the Newcastle Infirmary this morning. It consists, as you see, of a parovarian cyst, the size of an egg, a disorganized ovary, and the fallopian tube. I tied the pedicle close to the uterus with a single

thick silk ligature. Alarming haemorrhage followed the division of the pedicle, due to the slipping of the ligature, and it was with considerable difficulty that the vessels were found and ligatured, one by one. I regret that I did not transfix the pedicle and secure it with two ligatures. It could have been done, no doubt, but I found very great difficulty in doing it, on account of the depth the parts were situated at from the surface. In performing the operation, oophorectomy, I have before found it anything but an easy procedure to secure the pedicle. Often the patients, as in this case, are in good condition, with a considerable layer of fat over the abdominal wall, and with well-developed and healthy abdominal muscles, making it very difficult to apply a ligature, securely, at the depth it has to be tied.

TUMOUR OF THE KIDNEY.

Dr. ADAMSON exhibited an immensely enlarged kidney, removed *post mortem* from a patient who had been under his care.

Some nine months ago the man, while carrying some heavy plates, fell on his right side. Shortly afterwards he complained of a pain in his right loin, no pain having existed there before. After a time a tumour was felt in the right loin, and six months subsequently severe pain was experienced along the course of the sciatic nerve. At this time he was admitted into the Newcastle Infirmary, where he was treated, among other methods, by Corrigan's button for the sciatica, with some relief of his symptoms. On being discharged, however, and returning home, the tumour in the loin went on steadily increasing, while the patient's strength declined, and he ultimately died. No operation was proposed during life. At the *post mortem* I found the right kidney enormously enlarged, and it was impossible to say where kidney structure ended and other tissues began, so closely were they blended. In the ureter, half-way down, was found a large calculus, completely occluding the passage, as I show you here. The question arose in my mind, was this calculus primary or secondary; was it the cause of the immense enlargement of the kidney by damming back the urine; or was it deposited in its position owing to some inflammatory process going on in the kidney and ureter? Members will observe that the pelvis of the kidney is very greatly distended. Would this man have been benefited by operation? Certainly the *post mortem* would indicate that he would, but the idea of impacted calculus was never suspected by me during the progress of the case; and in overlooking such a possibility, I, a country surgeon, have at least the consolation that I was not any more at fault than the great men of the Newcastle Infirmary who had also allowed the complication to pass undiagnosed.

CALCAREOUS TUMOUR OF PNEUMOGASTRIC.

Dr. TAYLOR, Hetton-le-Hole, exhibited a tumour, found *post mortem*, in the case of S— S—, wife of a coal miner, aged 50 years.

She was a stout, fresh-looking woman, and enjoyed pretty good health up to about two years ago, when she had the "change," and since then she has had slight attacks of dyspnoea. In the beginning of May, 1885, she was suddenly seized with a severe attack of dyspnoea, and feeling as of approaching death, with choking sensation in the throat. Examination of the chest showed the lungs normal. The cardiac action was irregular, and there was a presystolic apex bruit. These attacks kept recurring at frequent intervals, between which she had comparative freedom, so long as she kept perfectly quiet. In the middle of June vomiting commenced, and persisted in spite of the usual remedies. The vomit consisted of mucus, tinged with bile. Under treatment by pot. iodide and belladonna, the vomiting diminished for about a week, but then returned as before, and for the last ten days she was nourished entirely by enemata of beef tea. She died on the 22nd of July, with suppression of urine for two days, and uræmic symptoms. *Post mortem*.—All the organs of the body were in a state of extreme fatty degeneration, soft, flabby, and friable, especially the liver and kidneys. The lungs were normal. The heart was in the same condition as the other organs, but showed no signs of valvular disease, neither was there any disease of the blood-vessels. A small calcareous tumour was attached to the left vagus, at the origin of the inferior laryngeal.

In the proved absence of valvular disease I would ask what was the cause of the cardiae bruits? Was the tumour the cause of the vomiting, and, if so, why was that symptom of such comparatively recent date?

A CASE OF PYO-SALPINX.

Dr. MURPHY submitted two abdominal tumours removed in July last, from a patient aged 23 years.

There was a history here of abdominal tumour extending over four years. On admission to the Sunderland Infirmary, a tumour was felt adherent to pelvis on the left side, while in a similar position on the right side a tumour existed which was quite movable. After consultation with my colleagues, I came to the conclusion that the growths were probably ovarian, though it was most unusual to have ovarian tumours existing for four years without much inconvenience. It was determined to make an exploratory incision, and the patient was put under chloroform for this purpose, but nearly expired from the effect of the anaesthetic. Restorative measures were, however, successful, and the operation

was gone on with. In completing the abdominal incision I most unfortunately cut through the wall of the bladder, which was reflected up over the growths. The wound in the bladder I carefully stitched with a continuous suture, and determined to go on with the operation. The right tumour was easily removed, and the left was dissected from its adhesions and carefully taken away. The abdomen was cleaned out, and the abdominal incision brought together, a catheter passed and tied into the bladder to drain off the urine, and, thanks to the incessant care of my house surgeon, the patient recovered without a bad symptom, except that for some days after the operation a quantity of sero-sanguinous discharge welled out of the drainage tube. The nature of the growths is interesting. As you will see, both ovaries, which are attached to the tumours, are quite healthy, and there is no doubt in my mind that the case is one of double pyo-salpinx, an opinion which is confirmed by Mr. Lawson Tait, to whom I have submitted the specimens now on the table.

Dr. GOWANS bore testimony to the thorough success of the operation. He had seen the patient after her discharge, and she looked extremely well.

Mr. PAGE said that two years ago, in operating for uterine fibroid, he made the same mistake as Dr. Murphy, and cut into the bladder—he was sorry to say with a less satisfactory result, as his patient died. He had previously seen the same misfortune occur to an able surgeon while he was house surgeon at the Newcastle Infirmary, and the mistake was one easier to make than those practically unacquainted with abdominal surgery would think.

Dr. MORGAN stated that the fluid which came out of the drainage tube after the operation looked to him like menstrual fluid. The temperature was throughout quite normal, and the discharge was certainly not blood alone, but had all the characteristics of the menstrual flux.

Dr. HUME said that Dr. Morgan's statement corroborated Lawson Tait's theory that the tubes had something to do with the menstrual function.

Dr. MORGAN believed that was so.

FIBRINOUS CASTS OF THE TRACHEA.

Dr. MORRIS exhibited a number of fibrinous casts coughed up by a patient under his care.

Annie A—, æt 56 years, first complained of stiffness in throat on 24th March last. She was seen by me on the 26th, and on examination I found the whole throat injected and polished. No enlargement of glands. On 27th I first noticed

a patch on right tonsil, diagnosed diphtheria, and treated her accordingly. The case proceeded without incident of note till the 16th of April, when my patient coughed up these casts, which I show, and which are casts of the trachea ; the marks of the rings being plainly shown. On the following day she coughed up this piece, which you will observe is a cast of the lower part of the trachea, with the bifurcation into the bronchi. On the 18th she coughed up these smaller pieces, which have apparently come from the larger bronchial tubes ; and three days later she brought up this, the last piece, which is a cast of one of the bronchi where it is dividing into its smaller radicles. After this there was for some time an abundant expectoration of a mucoid character, but she progressed favourably until the 15th of May. In the earlier stages the treatment consisted locally in swabbing out the throat every hour with a 1 in 200 carbolic sol., and she also used a spray of the same sol. of 1 in 6 strength. Tinct. ferri perchlor and pot. chlor. were given internally, and port wine was administered freely. On the 18th of May, three days after leaving her room, she had suppression of urine, which yielded to treatment after existing for 12 hours. After this she was out of bed every day, feeling stronger and taking food well ; but on the 28th she suddenly developed pneumonia, and her strength having been sapped by the previous illness, she rapidly sank and died.

IMPRESSIONS OF STUDENT LIFE AND HOSPITAL PRACTICE IN PARIS.

BY JAMES MURPHY, B.A., M.D., &c., Surgeon to the Sunderland Infirmary ;
Lecturer and Examiner in the University of Durham College of Medicine at Newcastle-upon-Tyne, &c.

MR. PRESIDENT AND GENTLEMEN,

One evening last year, when my friend and former fellow-student, Mr. Oscar Wilde, was staying with me, I pointed out to him that some of the statements about America, in the lecture which he had just delivered were, to say the least of it, inaccurate. He replied that probably they were, but all he alleged was that they were "his impressions of America," and in this paper I purpose to follow his example as far as regards its title, and to give you my impression of student life and hospital practice in Paris for what they are worth ; for though I do not purpose to further emulate my æsthetic friend, I at once place myself in a position of greater freedom and less responsibility than if I were to undertake a thorough and complete account of French students and Parisian hospitals, as my knowledge of them is limited to what I observed during my recent summer holidays. But as far as I, a stranger imperfectly acquainted with their language and customs, could judge, they are an accurate account of what I actually saw. The men I was most anxious to see were Tarnier and Péan. My friend, Mr. Lawson Tait, gave me a very kind letter of introduction to the former, and Sir Joseph Lister gave me an equally kind one to the latter, as well as a similar note to M. Trelat, President of the Academy of Sciences and Professor of Surgery, and Surgeon to l'Hopital de la Charité.

Thus equipped, I crossed over from Dover to Calais, and in due time reached the Grand Hotel, Boulevard de Capucines—which I can recommend to visitors—at Paris, and from there wrote to Messrs. Tarnier, Péan, and Trelat, enclosing introductory letters, and assuring them of the profound respect and high esteem I had for them, their hospitals, and their country ; and I flatter myself had I been born in the country I could not have put it more courteously. In due time I got equally courteous invitations to visit their hospitals. The first was from M. Trelat, making an appointment to meet me the following morning, at ten o'clock, at the hospital to which he is attached. At the appointed hour I reached the hospital and interviewed the concierge, when, after a good deal of mutual bowing and interchange of *plaisanteries*, I enquired if Monsieur le Professeur had arrived. The concierge, in the most deferential, and indeed I may say reverential manner, assured me that he would not be there till eleven. Now, presuming to know the punctilious courtesy of distinguished Frenchmen, I assured him

that the Professor either had already arrived and was now waiting for me, or else he would be here in a moment or two. I was rather annoyed at the fellow's obstinacy in telling me I would be fortunate if he reached the hospital by eleven, as the chances were that it would be half-past that hour. So, as the man seemed to know what he was talking about, I asked for the *chef-de-clinique* (house surgeon), and, on being presented to him, nothing could exceed his civility and distress, for my sake, at the untoward accident that must have befallen M. Trelat, as in no other way could he account for his non-appearance ; he, however, ventured to hope that the said accident might not after all have been a fatal one, in which case M. Trelat would be sure to come presently, and, in the meantime, would I condescend to accompany him round the wards. I condescended, and at once entered into a low badly-ventilated ward, containing about forty beds as closely packed as they possibly could be, several even being placed lengthways between the feet of opposite beds.

There were about thirty students in this ward, whose average age would be five or six years higher than of a similar number of our English students, and in personal physique and personal cleanliness there was a marked contrast, our nationality having the better of it. The *chef*, whose name was M. Marchand, and the dressers, eight in number, wore long grey calico coats like dressing gowns—which they might aptly be called—over their ordinary clothes, to protect them, which, considering their age, appearance, and length of service, appeared to me superfluous. In addition to the students mentioned, who were of the male sex, there were about ten other students of the gentler sex, all, I believe, Russians, who spoke French but imperfectly, but seemed anxious enough to pick up all that was going on. These good ladies were about thirty years old—if I may venture to surmise on so delicate a subject—of harsh and unkempt appearance, and were, I was told, generally very impecunious and herd together, six or seven inhabiting one small room ; whilst others, more enterprising, and from motives of economy solely, enter into an arrangement with a fellow-student of the opposite sex and of French nationality, with whom they pursue their studies and amusements in common.

After a brief conversation with M. Marchand, it struck me very forcibly he and I were not speaking the same sort of French—possibly he was from the country, and spoke some provincial dialect that I was unacquainted with, so I suggested, to save time, that he should get one of the students to act as interpreter. This he readily did, and, with the usual civilities, he presented to me a gentleman who, I should say, was a typical example of a French chronic—a pleasant, genial fellow to chat with, who seemed to have a smattering of most things except his profession ; but he was

so utterly ignorant of the latter that we did not get on much more rapidly, besides which I at once discovered he had been taking mercury pretty freely of late, and had had in addition garlic for his breakfast, neither of which conditions are agreeable in an interpreter; so I dropt him as rapidly and politely as I could, and discovered another, a Mynheer van Timmermans, a Dutchman, and therefore, needless to say, a polyglot. This gentleman, having tried his abilities, though I did not grapple to my soul with hooks of steel, I yet took measures to secure his services during my stay in Paris, and those services I found most valuable for the purpose I wanted. He was a most intelligent and agreeable companion, and was ridiculously like in stature, figure, and general appearance to the late Signor Mendiorey, when he appeared in the character of the Count de Luna in Verdi's well-known opera, "Il Trovatore." While going round with Marchand I saw the usual collection of surgical cases, such as fractures, ulcers, sprains, &c., and was amused at one case of necrosis in which he having failed to touch the sequestrum with a probe, the patient politely said, "permittez-moi, si vous plait, Monsieur," to which he replied, "avec plaisir;" whereupon the patient at once struck the sequestrum and handed the probe to Marchand, triumphantly ejaculating "Voila, Monsieur," to which the latter cheerfully answered, "Merci, merci, mon bon ami."

A little after eleven, as I was beginning to feel "au fait" at the work, Trelat arrived, and the next ten minutes were spent in bowing to each other in true French style; after which he proceeded to remove an ingrowing nail from a buxom lass of some twenty summers. No chloroform was administered, she seeming to be quite content with some attention paid to her axillas by the students on each side. After this I was shown some very interesting cases—a large ovarian tumor, a large abdominal cyst, which Trelat alleged it to be, and which probably was, a renal cyst; also a case where he had removed the tongue, on the previous day, with scissors, having previously tied the linguals, as Billroth recommends. He was acquainted with Whitehead's method, but had never tried it, fearing the hæmorrhage. I assured him of its safety and of its excellent results; and though, I fear, I did not make much impression at the time, he may, nevertheless, be induced to try it at some future period, as he lost his patient on the fourth day from hæmorrhage at the seat of ligature of the linguals in the neck.

He then showed me a series of uterine cases, examining them on their backs with no covering save a *robe de nuit*, short and scanty, resembling an English *robe de jour*, and in one case even this was dispensed with. In a severe case of cervicitis he freely applied the thermo-cautere, and demonstrated the opening very clearly in a case of vesico-vaginal fistula, by passing through the urethra a

straight instrument of his own invention, which, when it was *in situ*, projected out a small cross-bar at right angles. He talked incessantly all the time, swearing like a trooper, which he was, having been a distinguished cavalry surgeon during the war.

Afterwards we went to the histological laboratory, where he showed me some most excellently-mounted sections, and presented me with this collection of drawings which I show you. As you will see, each case is briefly described as regards its history, treatment, and result; and in addition, very good microscopical drawings are here lithographed in a manner which I commend to our honoured friend, the pathologist of this Infirmary. Here also I saw a uterus he had removed a few days previously by the vaginal method, and which two artists were drawing, one in pencil, the other in colours; the case did well, and is recorded in the *British Medical Journal* for August.

He then took me into his private room and pointed out to me several curious drawings on the wall by former students, and finally bade me *au revoir*, cordially inviting me to come daily to his clinique; but above all, on my return to London, to "tell many things of him to Sir Joseph Lister, and to bring him back to his sweet memory," at least so my interpreter rendered it.

I saw a good deal more of Professor Trelat and l'Hopital de la Charité, but time will not permit of further details, except I may mention that I saw him apply the galvanic cautery for fully ten minutes to a retro-pharyngeal polypus in a patient aged 12 years, without chloroform, which the boy declined, and not a sound was uttered by the patient—the whole thing, I take it, would be an impossibility in this country. His method of amputation is also worth describing. One day he amputated a man's thigh, and it was done in this fashion—the man was a tailor, aged twenty-five, and he had suffered from infantile paralysis of the right leg, and Trelat thought he would be better without it. He proceeded to amputate it at the middle of the thigh. While chloroform was being administered on a piece of lint, he delivered a very humourous lecture on legs, both natural and artificial, and pointed out that artificial limb-making had now become so perfect that most of us could purchase straighter and more shapely, if less useful legs than we at present possessed, and that in this particular case it would be an immense gain to the man to have his removed. He then passed a tenetome subcutaneously a little below Poupart's ligament, in very dangerous proximity, I thought, to the femoral vessels; and after working it about a little, he informed me he had divided the tendons; but what tendons, or why he divided them, I am at a loss to know, nor could I get an explanation of the reason for this division. He then formed an anterior and a posterior skin flap, and proceeded to cut into the muscles, dividing only a small portion at a time, and

when it had retracted, dividing the muscles further at the points they had retracted to. In this way he gradually got down to the bone, which was in due course sawn across, the *chef* holding the femoral with his thumb, no Esmarch's bandage or tourniquet being used, nor, to my horror, was any antiseptic applied so far. The vessels were then tied with catgut, and about a pound of iodoform placed in the wound. He then passed two stout wires through the base of the flaps, which were secured with pieces of lead. This, he informed me, was to prevent retraction of the flaps in the not improbable event of failure of union by the first intention. He then took an instrument, in size and shape like our ordinary British bradawl, but with an eye at its point. This curious instrument he passed through both flaps, along their edges—a student, on his knees, passing a wire through the eye each time it was forced through. In this manner the flaps were rapidly sewn together; no drainage tube was used; and an immense mass of iodoform wool was wrapped round the stump, this being secured by an elastic bandage. Such, sir, is the method of amputating pursued at l'Hopital de la Charité. I was so pleased with the civility and intelligence of Mynheer Van Timmermans, that I asked him to accompany me to my hotel for *dejeuner*, which he did; and afterwards we went down to Auteul on one of the river boats, during which time my friend gave me a good deal of information about French student life in general and his own in particular. He was an orphan and had been one for six years, while he had been a medical student for eight; but the £6,000 left him by his father was disappearing, and he was getting more sense; he was now thirty, and he was working hard, and hoped in a few years to qualify, when he purposed commencing practice in some large seaport town of a country that he had not yet decided on, when he would put on his door a large brass plate with this seductive inscription—

DR. TIMMERMANS,

PHYSICIAN, SURGEON, ACCOUCHEUR, &c., &c.

N.B.—DUTCH, FRENCH, GERMAN, SPANISH, RUSSIAN,
ITALIAN, AND ENGLISH SPOKEN.

and thus hoped to acquire a large practice amongst foreign sailors, whom he regarded as the most lucrative and satisfactory class of patients—lucrative because they generally had money on coming into port, and satisfactory because their stay in port was too short to get thoroughly disappointed with the uncertain results of treatment.

He was not very clear on the procedure necessary to acquire a medical degree in Paris, never having had occasion to present himself for an examination so far, and I found his statement on this

subject most erratic and unreliable ; but as the whole question is fully explained in the September number of the *London Medical Record*, I will not enter on it. He lived in the Quartier Latin, a large district on the left bank of the Seine, surrounding the Sorbonne, a building erected in 1627 by Richelieu for the theological faculty in Paris, which is now also the seat of the faculties of science and of letters, the faculties of medicine and jurisprudence occupying separate buildings. The whole quarter is inhabited by students, artists, journalists, and other Bohemians, and the hotels, cafés, shops, &c., exist only for these. It is in fact, he assured me, the brain of Paris.

Each student has a single or a suite of rooms according to his circumstances, and these of course are variously furnished ; but I was given to understand no matter what the means or tastes of the students, a lady was regarded as an indispensable part of the menage. She did the shopping, cooked the dinner, sewed on the buttons, kept the rooms neat, and supplied an element of home life which is generally unknown in this form, at least to the English student.

As an obstetrician, I naturally asked him if midwifery cases often happened in these establishments, to which he replied not often, but sometimes such accidents did occur, but in a few days the little culprit was safely lodged in l'Hôpital pour Enfants Trouvés. I also asked what became of the Maries, Hélènes, and Clothildes when the student left Paris, and was told they were set up in shops, or handed over to other students ; but I could not help thinking that a good many cross over the Seine and trade on the Boulevards at night, and that many a ghastly corpse, exposed on the cold slabs of the Morgue with the official label "*une femme unconnu*" attached to it, had once been a happy grisette in the Quartier Latin.

The next day I visited l'Hôpital Hotel Dieu, a magnificent pile of buildings, from an architectural point of view, erected in 1875 at a cost of thirty millions of francs, more than a million of our money.

The arrangements here are most elaborate—a complete system of tramways on each floor, with lifts, &c. ; the most perfect system of baths I have seen ; the wards lofty, well ventilated, and not overcrowded, but, curiously enough, all the beds in the service of M. Richet are four-posters, with long curtains effectually shutting out air and light. But, magnificent as all appears, the hospital is badly planned. Instead of our pavilion system, it is arranged in enclosed courtyards, rendering it impossible for fresh air to freely permeate the whole building. In each courtyard there is a series of terraces for the patients to walk about in ; the lower one is enclosed in front with glass, the one above this is open in front,

the highest one is open on all sides and uncovered at the top. It contains over 800 beds. The chef de clinique, whose name I cannot recall to mind, was an exceedingly intelligent, well-informed man, and will, I suspect, one day make his mark as a modern surgeon in Paris, a position at present unoccupied as far as I could discern.

Early next morning, Péan sent me a card asking me to an ovariotomy in private; but such was the abject servility of the waiter that, finding me asleep, he would not undertake the responsibility of disturbing my slumbers, although the letter was marked "*immediat*," and my disgust had better be imagined than described when I awoke some hours afterwards and found it was too late, and that I had missed the opportunity of seeing such an important operation done by Péan at a private house. I think, however, it was the only thing I did miss during my stay, and I made up for it by what I saw at l'Hopital de St. Louis on the following Saturday. I reached the hospital at 9·30 a.m., and was shown into a large theatre, where some two hundred surgeons and students, of various nationalities, and of ages varying from 25 to 70, were assembled. The jargon of the different languages reminded one forcibly of Babel's tower; but suddenly all was hushed, every one rose to his feet, and then, amid a deafening stamping of feet, clapping of hands, and round after round of applause, a door opened, and, in an instant, the great Péan was before me—a low-sized, powerfully-built man, with high-receding forehead, dark piercing eyes, sharply-chiselled features, Jewish-looking nose, and cold determined-looking mouth, with lips and chin clean shaved, and large whiskers turning grey, a handsome face withal, and one in which courage, determination, and an utter disregard for consequences was markedly expressed. He was, as is his custom at operations, dressed as for a dinner party, wearing a cut-away coat bearing his ribbon of the Legion of Honour, white open waistcoat, black trousers, and patent leather boots. He bowed to his audience, who then sat down, and a patient was at once brought in on a stretcher by two warders. These warders had been cured by Fournier of lupus of the face, but had lost their noses and had not the benefit of having been operated upon by our esteemed associate, the senior surgeon of this Infirmary, Dr. Arnison. The patient was at once put under chloroform, and Péan proceeded to lecture on the case. This lecture was continued the whole time he was operating, and until the patient was removed from the theatre. It was a case of an enlarged scrofulous gland in the neck, of the size of a walnut. The patient having taken chloroform, Péan seized a scalpel and with one sweep laid bare the tissues from the mastoid to the clavicle, and in an instant he had a finger of his left hand on every bleeding point; dis-

carding the scalpel then, and taking up a forceps, he raised a finger and at once seized a vessel, and in this manner he quickly applied five pairs of forceps, raising his fingers as a musician plays a flute, and seized his vessels so rapidly and so skilfully that scarcely a drop of blood was lost. He then proceeded to cut and hack all round the little tumour, catching up the vessels in the most marvellous manner and eventually, to my great relief, removed the growth. He then—the patient still on the table—advanced nearer the audience, explaining the difference between a scrofulous, an inflammatory, and a cancerous tumour, made sections of the specimen, and thus spent fully twenty minutes before he returned to the patient, from whom he then removed another small gland, and, finally, the patient was carried out of the theatre without a single ligature or stitch being applied, having no less than eighteen pairs of forceps dangling from a wound some eight inches long. As some of you, gentlemen, may doubt the possibility of getting on so many pairs of forceps in so limited a space, I assure you that, though it requires a little manœuvring, it is possible, and I here have eighteen pairs applied to a piece of flannel, which I now place on my neck, that you may the more fully appreciate the performance. The next case was almost identical. The third was the removal of a small morsel of sequestrum from the angle of the jaw, which was reached by incisions as free and as extensive as if removal of the whole head were contemplated. Then came a chronic abscess of the thigh, which was ripped open by a sort of sickle, and its walls and the neighbouring muscles scooped away by an instrument resembling, in shape and size, a large gravy spoon, with sharpened edges ; and thus for three hours were human beings cut up and scooped at as if the horrors of the Inquisition were to be revived. It was a sickening sight, and when I was told by a man, who attended regularly, that some of these unfortunate people recovered, I could scarcely realize it, though I suppose it is possible from the immense number he operates on.

For mere manual dexterity, to see him operate was a sight I shall never forget; it was magnificent; but it was not surgery, and as the Parisians say there is but one Paris, I sincerely trust there is but one Péan.

At this hospital, in the service of M. Fournier, I saw two beautifully-marked cases of leprosy. Both were boys, one aged 15, the other 16, but each looked as if 60, and each had the anæsthetic patches and the leonine aspect marked to an extraordinary degree. One was recovering under Gurgan oil, the other was dying.

Here also, on Wednesdays, any of the community afflicted with itch, may be cured by what is known as the five and forty minutes treatment. The patients form “en queue” in troughs of a solution of sulphur, and proceed vigorously to wash their own chests and their neighbours’ backs for three-quarters of an hour, during which period the *acarus scabies* has a bad time of it.

The instruments used by Péan were brought to the hospital by M. Mathieu, surgical instrument maker, and taken away after the operations. At his establishment, and at that of M. Collin, I spent several hours examining instruments, some of which were very fine, notably the stone and stricture instruments of M. Guyon; but on the whole I prefer our English-made ones, but I purchased this double-channelled tube, invented by M. Auvard for washing out the uterus, and this clyster apparatus, which is extensively used as an irrigator in the French hospitals, and which I find very useful at the Sunderland Infirmary for washing wounds with carbonic or corrosive sublimate lotion, as also some obstetrical instruments which I shall presently show.

Professor Tarnier kindly placed the whole of Friday afternoon at my disposal, to visit his maternité, at the Rue Port Royal, and received me in his private room, where he introduced me to his chef de clinique, and the sage femme (matron) of the establishment. We spent over an hour in this room in examining his instruments, more especially the various modifications he has made in the forceps, and I have much pleasure in exhibiting to the Society the last and best forceps he has devised. He found the perineal curve in his old model sometimes caught in the arch of the pubis, so, as you see, he has dispensed with it, and has substituted a curve in the extremities of the traction rods. The lock remains the same, the rods are differently attached; but I have here a foetal head and female pelvis, on which I can more clearly explain the advantages of his new forceps. [Dr. Murphy then demonstrated the working of both models of Tarnier's forceps.] This is his new basioclast, which acts as a basiotribe, a tractor, and a cranioclast. [The use of this instrument was also demonstrated.] From a somewhat extended knowledge of such instruments, I have no hesitation in pronouncing it the most perfect and useful instrument of its kind that I have seen. He also showed me a large collection of casts of heads operated on by this instrument; also a very interesting chart, showing the mortality for each year since he has had charge of the hospital. There are two marked falls in the mortality, the one several years back, when he at once separated the patients suffering from any infectious disease from the others, and the other fall occurred four years ago, when he introduced antiseptics in the treatment of all his cases, so that now the mortality is very small. He carries out antiseptics in the most rigid manner, and it is needless to say is a most firm believer in its efficiency.

We then went through each of the wards, and he was good enough to invite me to examine all the cases of interest, including some in labour. He showed me his hydrostatic bags for inducing labour, and was even good enough to use them in a case he had

kept for my inspection. This hospital is not attended by medical students, but is used for the training of midwives, whose education is made very complete ; and, amongst other things, they are instructed in the use of the forceps.

I was also much interested in his *couveuse*, or incubator, in which all premature children are brought up. He has thus several times reared children born at the sixth month, one he showed me only weighing two pounds at birth. These instruments are not only used for patients in the hospital, but premature children born outside have the blessings of their hospitality extended to them, and those I saw there seemed to thrive very well in this strange foster mother.

Many other things, sir, did Professor Tarnier teach me. Nothing could exceed his kindness and civility to me. I spent a most instructive afternoon with him ; and with the exception of yourself, sir, and the members who are present, it has never been my good fortune to meet so charming a man. In return, I thought I was paying him a very nice compliment when I told him, in saying good-bye, that in future I would date the commencement of my obstetrical education from the day I met him ; but he had the best of it when he told me I must come over next year again to see him, and in the meantime he would learn English so as to speak with me without the aid of an interpreter. He presented me with this medallion, which is an excellent likeness of him, as a *souvenir* of my visit, and it is a memento that I value very highly.

Were this the place, and would time permit, much more could I tell you, sir, of my impressions of the most lovely city upon earth—of its glorious climate, of its gay and ever polite inhabitants, of its stately buildings, and its beautiful parks and boulevards, its excellent restaurants and magnificent opera house, and the wonderful Louvre, with its enormous art treasures, including tons of statuary and miles of pictures ; but I have already sorely tried your patience, and will conclude with a grateful acknowledgment of the forbearance and attention you have bestowed upon me, and will reserve these things for conversational elucidation.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

SESSION 1885-86.

NOVEMBER MEETING.

THE SECOND MONTHLY MEETING of the Society was held in the Library of the Newcastle-on-Tyne Infirmary, on Thursday evening, Nov. 12th—the President (Dr. Fielden) in the chair.

NEW MEMBERS ELECTED.

The following gentlemen were duly elected members of the Society:—

- J. H. Blandford, L.R.C.P., M.R.C.S., Norton.
- Robert Hardie, M.B. Durh., Dispensary, Gateshead.
- E. A. Harbord, L.R.C.P., M.R.C.S., Heaton.
- C. L. Lightfoot, M.B. Edin., Saville Row, Newcastle.
- Wm. Mackay, M.B. C.M., Sunderland.
- E. L. Prowde, M.A., M.D., The Knoll, Sunderland.
- J. Rutter, M.B. Edin., Felling.
- R. Smith, M.D., Sedgefield.

NEW MEMBER PROPOSED.

Frazer Hürst, L.R.C.S., Walker.

EPITHELIOMA OF TONGUE AND FLOOR OF MOUTH.

Dr. MORISON, in introducing a patient upon whom he had operated, said :

Four years ago I operated upon this old man for cancer of the tongue and floor of the mouth, he at that time being 60 years of age. The growth was an epithelial cancer, involving the anterior half of the tongue, the floor of the mouth, and was adherent to the lower jaw behind the symphises. On both tongue and floor of the mouth there were patches of ulceration. I removed the anterior part of the tongue by a Λ shaped incision the whole of the floor of the mouth, and $2\frac{1}{2}$ inches of the front of the lower jaw. The gap in the jaw was too wide to be brought together, but the members will see that it has filled up with new tissue, and there is no great amount of movement between the two sides. I have

brought this case forward to show that in these hopeless cases one sometimes gets very good results. This man has a tolerably useful jaw, fair powers of speech, and though four years have elapsed since the operation, there is no trace of recurrence of the disease.

Dr. FIELDEN congratulated the operator on the unusual success of his operation.

EXCISION OF THE KNEE IN A CHILD.

Mr. PAGE showed a boy whose knee he had excised, and said :

This child's knee was excised just one year ago for disease of the joint, and the result is satisfactory. The points to which I wish to direct the attention of the Society are, first, the age of the patient. The boy is eight years old, not, in my experience, at the best age for excision, but he has a useful limb, and although he has grown considerably since the operation, the shortening is, at present, not an inconvenience. I think the limb is growing with the rest of his body. The second point is the method of operating. A straight incision was made across the joint, the patella cut through, and the diseased structures removed in the ordinary way. The patella was then sutured with stout catgut instead of with silver wire, as is generally used. I think this method of ligaturing the patella has obvious advantages. I have employed it once in the adult, with a very satisfactory result—firm, bony union of the patella.

LIGATION OF FEMORAL FOR POPLITEAL ANEURISM.

Mr. PAGE showed a patient, and said :

This is the man whom I intended to have shown at the last meeting of the Society. He was at that time suffering from a large aneurism of the left popliteal artery, of some two years' standing. There was no history of any injury. The man is 47 years of age, a barman by calling—a *rara avis*, a teetotal barman. He has not, however, always been so steady as he now is, and there is physical evidence that he has suffered from venereal disease. The femoral artery was tied, just a month ago, with a stout catgut ligature, and the wound has healed kindly. The aneurism is quite cured. Pressure was not tried in this case. This makes the third case of popliteal aneurism I have treated by ligation of the femoral this year, and I am happy to say they have all done well.

CASE OF SUPPOSED TRAUMATIC EPILEPSY.

Dr. OLIVER exhibited a patient whose skull had been trephined for supposed traumatic epilepsy, and said :

This boy, 16 years of age, was admitted to the Newcastle-on-Tyne Infirmary in April last, suffering from fits. He had measles

when a child, but has since been healthy. The mother is said to have been subject to fits, but father is quite healthy, and the family history generally is good. Some months before admission the boy had fallen on the back and right side of his head. The fall was apparently a severe one, but the boy did not lose consciousness. He was sick, but had no vomiting. Ever since he has complained of pain over the seat of injury, namely, on the right side of the head, above and in front of the ear. In February of this year he had his first fit, and since that time they have increased in number and severity, he having often had two or three in a day. On admission the fits were seen to be of a very severe character, and before each fit the pain in the head was intensified. Pressure over the injured part gave great pain. After a time the boy developed choreaic movements, first involving the right side and then changing to the left, and there was subsequent loss of power in left arm and leg. Finding no relief to symptoms by the usual remedies, I consulted my colleagues, and though at first trephining was opposed by some of the surgeons, it was ultimately decided upon after a further trial of medicine with no improvement. Dr. Hume performed the operation, and trephined $1\frac{1}{2}$ inches above the margin of the right ear, which was, so far as could be made out, the seat of injury. Immediately the disc of bone was removed the membranes bulged into the wound, and on these being opened, about ten drachms of flaky serum escaped, and altogether the discharge that came away during the day would amount to between two and three ounces. The fits continued after the operation, but since he came back under my care I have put him on mercury and pot. iodid., and the fits have become much less frequent and severe, and there is not the same loss of power after a convulsion.

Dr. HUME: This is the piece of bone I removed, and you will see that it includes a piece of the suture between the frontal and parietal bones. There is, therefore, a growing edge of bone left, and in course of time the triphine hole will be closed up. My reason for at first hesitating to operate was that there was nothing to lead one directly to a relation between the blow and the fits. The wound did not to me appear to be over the convolutions about the fissure of Rolando, and the case to my mind did not present symptoms of the involvement of the phsyco-motor area.

Dr. PEART: Were there no pathological appearances at the time of operation?

Dr. HUME: None were detected.

Dr. PEART: Have the same remedies been followed after the operation as were tried before?

Dr. OLIVER: Yes.

Dr. FIELDEN : Was there really lymph in the fluid evacuated ?

Dr. OLIVER : I think there can be no doubt about that. There was no injury to skin and none to bone so far as could be made out.

Dr. ANDERSON : Has there been any subsequent bulging at the seat of operation ?

Dr. OLIVER : None.

PERFORATING ULCER OF BOWEL.

Dr. MORISON : This portion of bowel which I show was removed from a man 54 years of age. He was drunk one Saturday night and woke up at four o'clock on Sunday morning with great pain in his bowels. His temperature, when seen shortly afterwards, was normal, and there was no vomiting. A sedative was administered, and on Monday morning he was feeling better. On Tuesday morning he got out of bed, and whilst sitting on the night-commode he suddenly expired. At the *post mortem*, evidences of peritonitis were present, with abundant lymph in the abdomen. The lining membrane of the bowel was covered with slimy mucous, and at this portion of the gut which I hold in my hand, and which has been examined by Dr. Drummond, a follicular abscess had formed with perforation.

INTUSSUSCEPTION OF INTESTINE.

Dr. MORISON : Here is another piece of intestine which I removed by abdominal section some days ago. The patient was a young man 21 years of age. Ten days before I saw him he had sustained an accident to his leg. His bowels had been confined for some days after the accident, but the day before I saw him they had been relieved with slight diarrhoea. When I saw the patient he was very sick, with constant vomiting. The bowels were tender all over and tympanitic in the right loin. He could not fully extend his right leg. I came to the conclusion that there was a perforating ulcer of the vermiform appendage, and determined to open the abdomen, wash it out, and drain it. I found a piece of intussuscepted intestine. I could not reduce it, so removed it and made an artificial anus. The intestines were still very much swollen after the operation, and the man never rallied, dying soon after from shock. The *post mortem* showed nothing further than the intussusception, which was so swollen and congested that when removed from the body it was found impossible to reduce it; but when it had been drained of blood and fluid reduction was easy, as there was no attempt at adhesions.

Mr. PAGE : What was the nature of the accident, and did the man attribute his condition to the accident ?

Dr. PEART : Was the exploratory excision median ?

Dr. MORISON : The accident was a crush on the foot, and the intussusception had no connection with the accident. The abdominal incision was to the right side of the rectus muscle.

Dr. PEART : Was vomiting faecal ?

Dr. MORISON : No.

Mr. PAGE : I remember the case of a young man, twenty years of age ; while running along the street, he ran against a lamp post. He sustained a scalp wound, which bled freely, but next day he complained of great pain in the bowels, and five days after the accident he died. *Post mortem* showed that the vermiform appendix was longer than usual, forming a loop, and in this loop a portion of bowel was entangled and strangulated. I have no doubt that in this case, at least, the accident and the strangulation were cause and effect.

Dr. MORISON : I do not think that in my case the accident had anything to do with the intussusception. I do not, from the symptoms and the appearance of the intestine, believe that the intussusception had existed more than two days before the death of the patient.

CASE OF PYO-SALPINX.

Mr. PAGE : This specimen of pyo-salpinx was removed from a patient aged forty, sent into the Infirmary, under my care, for the purpose of operation, by Dr. Burdon, of Willington Quay. The patient was in a very reduced condition of health, and of a marked scrofulous diathesis, and I am sorry to say sank on the third day after the operation.

Dr. BURDON : The patient in this case was about 40 years of age, and had been married 16 years. A year after marriage she had a miscarriage. She was very ill after that and had not since menstruated. From that time she complained of great pain in the womb. The pain lasted for five years and then disappeared. A year ago the pain returned. On examination I found a small patch of dullness in the left iliac region, about the size of half-a-crown. The pulse and temp. were normal. Per vaginum, nothing definite could be made out ; but per rectum there could be felt three protuberances behind uterus. These were very hard and tender, and the patient stated that she occasionally had discharges of blood and pus from the rectum. Dr. Oliver saw this case in consultation, and gave it as his opinion that the growths were fibroids. Passing a sound gave no pain except in the left horn of the uterus. After I had examined her, there was a considerable discharge of pus from the uterus. This relieved her for about six weeks, when the pain

returned in the right side. Dr. Page advised an operation about the beginning of September last, but the operation was not performed till a month later.

Dr. OLIVER: The flux of blood from the rectum occurred, I think, once a month.

Dr. BURDON: During the last twelve months there were only some five or six such discharges.

Dr. OLIVER: I saw this woman about a year ago, and made out a large hard mass lying behind the uterus. The only thing that suggested itself to me was a fibroid growth. The case is an interesting one, as I believe it is the first pyo-salpinx operated on in this Infirmary.

Dr. LIMONT: The following are the notes of the *post-mortem*:

M. E. died October 16th, partial *post-mortem* examination, October 17th.—Rigor mortis very marked; abdomen distended and tympanitic. Incision in median line, $4\frac{1}{2}$ in. long, reaching from $\frac{1}{4}$ in. to 1in. from pubis; the lower inch gaping, the remainder united by soft adhesions, which are easily broken down. Great omentum and intestines firmly united to abdominal wall by fibrous adhesions. Hollow viscera much displaced and firmly matted together, some parts greatly distended, others (such as two feet of small intestine contracted to diameter of $\frac{1}{2}$ in.) as markedly contracted. Liver adherent to the diaphragm. No signs of recent peritonitis in the upper part of the abdomen, and only slight evidence of it at lower end of incision; but in pelvis there is purulent peritonitis. In the last position, however, there are unmistakeable evidence of old pelvic peritonitis, *e.g.* coils of intestine fixed in front of sacrum; the right fallopian tube carried behind the uterus, and its closed extremity fixed near the normal position of the left ovary, at half-an-inch from the uterus. It is distended with caseous-looking material, and walls thickened. Uterus slightly backwards and to the right. Right ovary rough and hard, not enlarged nor fixed; its tube in the position described, apparently closed, and the fimbriæ gone.

Quarter to half-inch of the proximal end of left fallopian tube is seen projecting from uterus and much distended; a silk ligature is firmly tied round its outer end; the inner end communicates with the uterine cavity; a little pus oozing from the tube into the uterus on slight pressure. There is a small opening in the part of the tube left, through which pus escapes into abdominal cavity. There is a good deal of extravasated blood near the site of the ligature. The posterior wall of the uterus is smooth; the anterior has a projection, which on section proves to be a small intra-mural fibroid, the size of a horse bean. Behind the right ovary, on the

postero-interior wall of the pelvis, is felt a round soft swelling. On dissection, the great sciatic nerve is found to lie over the swelling, just as it enters the sciatic notch, and to be pressed forward by it. On incising the swelling, it is found to be an abscess, the cavity of which is about the size of a pigeon's egg; projecting into the cavity is hard necrosed bone, and on further dissection the edge of the sacro-sciatic synchondrosis is found to be affected for about two inches.

The part removed at operation is the size of a small hen's egg. It consists of the distended fallopian tube, of part of the ovary, of the fimbriated end of the tube, and of a round band running between the two latter. The tube is distended with thick curdy pus, which under the microscope shows pus cells, large granular cells, and debris. On removing the contents, the wall of the sac is found to be much thickened, and the internal surface is rough. The end of the tube also contains pus; a probe cannot be passed from it into general dilatation. The band mentioned is situated as if surrounded by muscular fibres. What appears to be the remainder of the ovary consists of a little thick tissue and one or two cysts. Under the microscope, the projecting band shows unstriped muscular fibres, circular externally, longitudinal internally, lying in fibro-cellular tissue, and contains some spaces lined by epithelium, and holding some granular material in which are some large round cells with nuclei. The wall of the sac also showed longitudinal and circular unstriped muscular fibres in fibro-cellular tissue, at some parts invaded by tubercular deposit. The mucous membrane contained a large number of small cell infiltration at parts, was caseous, and contained very numerous "giant cells with their systems.

FIBROUS STRICTURE OF RECTUM.

Mr. PAGE: These specimens were removed by Dr. Limont from the body of a female patient of mine, aged 50 years, who died recently in this institution from kidney disease—three weeks after right colotomy was performed for relief of intestinal obstruction. The previous history of the case is better known to my friend Mr. Baumgartner, who sent the case into the Infirmary under my care. I wish to draw attention to the cause of obstruction. This is the junction of the rectum with the sigmoid flexure. It is the seat of a very tight fibrous stricture, through which a probe only could be passed before the gut was slit open. No faeces had passed for 14 days, and the belly was much distended. I preferred to open the ascending colon because, though I was satisfied the obstruction was in the neighbourhood of the sigmoid flexure, I was unable to form any opinion as to the extent of disease there. The operation afforded complete relief, but the patient passed

slowly into a typhoid condition, and died three weeks after. At the *post mortem* both kidneys were found considerably diseased, and the flow of urine through both ureters impeded by cicatricial tissue—the result, apparently, of a severe attack of pelvic cellulitis, from which patient suffered a few months ago, after a uterine operation of some severity, performed, I believe, by Dr. Wm. Murray of this town.

A HYDRATED CYST.

Mr. PAGE: This specimen of hydatid disease is interesting from a diagnostic point of view. A healthy young man was admitted to the Infirmary, under my care, last Thursday, on account of a tumour in the neighbourhood of the inferior angle of the right scapula. It was about the size of a goose egg, smooth, round, unattached to bone, painless, and of eighteen months' growth. Most of those who examined it considered it to be solid, and, for various reasons, probably a fatty tumour. The introduction of an exploring needle cleared up all doubt. To reach the cyst, it was necessary to cut through fibre of the latissimus dorsi muscle, when it was easily extracted. The situation favoured the opinion that the growth might be a lipoma, and no doubt its depth from the surface, and the fact of its being beneath the latissimus dorsi muscle, prevented fluctuation being detected in it. Hydatid disease is not commonly met with in this country, and is found usually in the liver or some internal organ, which circumstances lend, I think, considerable interest to this case.

SPECIMEN OF AORTIC ANEURISM.

Dr. OLIVER: This very interesting specimen of aortic aneurism, which I show you, was removed from G. H., a seaman, 35 years of age, admitted under my care on July 9th of this year. On admission there was a swelling on the right side of the chest, with numbness and coldness of right arm, of three months' duration. There was a good family history, and no personal history of syphilis. Five months ago the patient, in a storm in the Bay of Biscay, was washed from the bridge of his ship, sustaining a severe fall, and was unconscious for two days. His right humerus and clavicle were both broken, and several ribs were fractured, and he lost a good deal of blood. For these injuries he was treated in the hospitals at Genoa and Constantinople. Until then he had been a healthy man, but since his accident had never been free from pain. About ten days before admission he first noticed a lump on the right side of his chest, about the size of a tea-cup, and very painful at night. His pulse was 84 weaker on right than left side, and the superficial veins in neck and abdomen were swollen. There was a large tumour, like a woman's breast, on right side of chest,

which pulsated and extended from the second to the sixth rib. The tumour was seven or eight inches in diameter, and had a circumference of twenty inches. It was dull on percussion. There were clear areas over the clavicle and the first rib, and also below the tumour. On auscultation both inspiration and expiration were coarse on the affected side, at the apex, and on the left side the respiratory murmur was coarse and bronchial. The heart sounds were healthy, while over the tumour a grating sound was heard. The sound in the tumour corresponded to the heart's systole, and there was at the same time a sense of heaving. The liver was displaced downwards. Some time after admission, one of the glands in the right axilla became swollen and painful, and the question arose was this a case of aneurism, or was it a pulsating sarcoma? On the 12th of August the patient had a sudden increase of dyspnœa, which 36 hours afterwards was followed by another attack of even greater severity, and in this the man died.

I have here the heart, sternum, ribs, and the tumour removed at the *post mortem* examination. I found the heart not very much enlarged, the ventricles being somewhat dilated, but the valves healthy. I also found a general dilatation of the aorta extending to the left subclavian artery. The aneurismal sac, which communicates with a long slit in the aorta, has passed forward between the layers of costal pleura, and opens into a blood space which lies under the pectoral muscles. This formed the pulsating tumour, which was felt during life. The point to which I would desire to direct the attention of members here is, what was the sequence of events in this case? Did the aneurism burst within the chest, forming a blood tumour behind the ribs, or did it burst externally. The man's death was due to the pain and exhaustion consequent upon the compression of the thoracic viscera.

Dr. MORISON: Were there any pulse tracings or cardiographic tracings taken in this case?

Dr. OLIVER: There was a distinct difference between the radial pulses. It was impossible to take cardiographic tracings, but I have tracings taken from the pulsating tumour which exactly correspond to those taken from the arteries.

Dr. HUME: The question of diagnosis in this case was a very difficult one. The impression it gave to me was that it was an aneurism, but it was difficult to say with what vessel the aneurism was connected.

Dr. OLIVER: Subsequently the preparation was opened from before backwards, so that a complete examination of the relations might be made. On cutting through the pectoral muscle, which was thinned at one point, the knife at once passed into a large

space containing fluid blood and blood clot. From this, through an opening made in the thoracic wall by erosion and separation of two ribs, the finger passed into another large space containing hard blood clot. This clot lay in and formed at that part what might be regarded as the remains of the anterior wall of the aneurism, which arose from the dilated aorta. The aneurism, therefore, passed forwards and to the right, detaching in its growth the costal pleura from its normal adhesions, and at places incorporating it with its own wall. Wall and ribs had by pressure both been at one place destroyed, and this allowed blood to find its way through an opening in the thoracic wall under the pectoral muscles, distending them, and causing during life the pulsating tumour already alluded to.

NOTE ON “TWO CASES OF SCIRRUS OF THE MAMMA WITH ECZEMA OF THE NIPPLE.”

By G. HUME, M.D., Surgeon to the Newcastle-on-Tyne Infirmary.

GENTLEMEN,—In the St. Bartholomew's Hospital Reports, for 1874, is a paper, by Sir James Paget, on “Diseases of the Mammary Areola Preceding Cancer of the Mammary Gland.” The paper is based on the observation of about fifteen cases, in which this sequence had been noticed, and the interest of the observation lay in the character of the so-called eczema of the nipple, and the relation it held to the later development of the scirrhus cancer. Sir James Paget seemed inclined to the belief that the eruption was not “different from what may be described as long persistent eczema or psoriasis, or by some other name in treatises on diseases of the skin.” He believes “that such cases sometimes occur on the breast, and after many months' duration are cured, or pass by, and are not followed by any other disease.” But he significantly adds, that in all the cases which he had been able to watch, cancer of the mammary gland followed within a period of one or at most two years.

In the two cases which I am bringing before you this evening, the order of sequence of the eczema and cancer was reversed. In both cases a lump had been felt in the breast—in one instance some years, in the other nine months—before the appearance of the eruption on the nipple; but in both the eruption was precisely of the character described by Sir James Paget. At one time the nipple would be quite raw, as if altogether denuded of epithelium, and then a crust would form, in time to fall off and leave again the raw condition. The tissues of the nipple were evidently much infiltrated, so that it felt hard and stiff; and the eruption was sharply limited to the margin of the areola. In other ways the two cases showed points of contrast. The one patient was a thin, meagre, single woman, forty-two years of age, in whose atrophied breast a hard tumour lay underneath the excoriated nipple. They were not adherent; the nipple moved freely on the tumour. The second patient was a healthy-looking, middle-aged woman, who had borne and suckled children, without having had, during the child-bearing period, any trouble with her breasts. The tumour occupied the upper half of the mamma, and seemed to be connected by strings with the projecting eczematous nipple. Below the nipple there was some fulness, with tenderness in the breast. The discharge from the nipple was a thin mattery fluid, very abundant in quantity.

I examined the two tumours carefully after removal in order to ascertain, if possible, the connection between the scirrhus and the

diseased nipple. In the gland removed from the first patient was a nodule the size of a pigeon's egg, from which slightly-developed fibrous bands passed towards the nipple. Sections were cut in a longitudinal direction—in the direction therefore of the lacteal tubes—so as to include the width of the nipple and the nearest portion of the nodule. These show infiltration of the connective tissue of the nipple, the result of irritative action ; but no change is found in the lacteal tubes, and the boundary of the cancerous area towards the nipple is sharply defined. The tumour in the second case was a very interesting one. The nodule occupied the upper portion of the gland, and from it strongly-marked bands of the fibrous stroma passed to the nipple. In the gland substance below the nipple a large abscess had formed. Sections from one half the nipple and adjacent portions of the nodule were cut longitudinally, as in the previous case : the other half was cut so as to obtain transverse sections of the lacteal tubes. In all these it is seen that the tubes are greatly dilated, and are filled with large epithelial (or cancerous) cells. The carcinomatous growth which, from the clinical history, had started in some portion of the gland substance, had in course of time extended along the lacteal tubes to their external orifices. I think there can be no doubt, as regards this case, that the eczematous condition of the nipple was a consequence of this invasion of the lacteal ducts. These would rapidly become distended by growing cells and cell-débris ; a cancer juice of a highly irritating nature would exude from the orifices of the tubes and readily produce excoriation.

It seems to me that a similar explanation probably applies to all cases in which the development of a tumour precedes the eczema. The growth of breast cancer begins, it is generally admitted, in the acini or tubes of the mammary gland. The lacteal ducts passing from the affected acini may be naturally supposed to remain pervious for a time, and free for the passage outwards of any discharge which is formed during the rapid cell growth. We know, indeed, that in a certain proportion of all cases of breast cancer discharge from the nipple takes place : and in subjects who are more liable to skin-irritation, or in whom this discharge is more abundant or more acrid, eczema, or as I would call it excoriation, will readily occur.

Properly speaking, these cases to which I have been referring were not instances of the so-called Paget's disease. To constitute the disease as Sir James Paget described it, the eczema must precede any appearance of tumour. But I am inclined to believe that, in at least some of these cases also, a similar explanation of the eczema may hold good. In these eczematous breasts a "stringiness" or induration of some portions may be felt previous to the formation of a distinct nodule. Such an induration in connection

with an excoriated nipple has been examined by Mr. Butlin, and in it were seen the same dilated acini and tubes with accumulation of epithelial cells as are to be found in more advanced examples of the disease. Based on these observations, the supposition does not seem unwarrantable that even in cases where a distinct interval elapses between the eczema and the formation of a tumour, a change may have been going on in the epithelium of some portion of the gland, which is at once the cause of the eczema and the initial stage of the scirrhus growth.

To my mind, the clinical evidence tells strongly against the view that the eruption in these cases is often, or usually, of the nature of simple eczema. It is, no doubt, an admitted fact that chronic irritations are apt to end in malignancy. But I would point out with regard to this eruption, that as a rule it is strictly limited to an area which would be directly affected by a discharge from the lacteal ducts ; that it is not associated with eczema in other parts of the body, and that it is almost, if not altogether, incurable by ordinary means. Besides, the cancer which ensues does not develope in the tissue which is the seat of the supposed chronic irritation, but in some part of the subjacent gland—the reverse of what might be looked for in an undoubted instance of a chronic irritation growing into malignancy.

The point is naturally one of great practical importance, because the belief or bias in the mind of the surgeon will influence his treatment. As he takes the one view or the other, he will spend time and patience in the trial of remedies, or will anticipate the growth of the expected scirrhus by an early removal of the breast. It seems to me that the forewarning is one not to be neglected, and indeed may offer an opportunity seldom within our reach of operating for malignant disease in good time, and with reasonable hope of success.

Dr. ARNISON: The paper just read should not be allowed to pass without some acknowledgment from the members of this Society. The practical conclusion at which Dr. Hume has arrived forms a very valuable addition to the contributions of the Society.

Mr. PAGE: I am afraid there may be some difficulty in carrying out Dr. Hume's recommendation in all cases. If one recommended a person with chronic eczema of the nipple to have the breast removed, the patient might not see it in the same light, and might go and seek advice elsewhere.

Dr. HUME: What Mr. Page has sketched as probable has actually happened to me in one case.

Dr. DRUMMOND: I have here a section of a nipple with eczema of 17 years' standing, and there is no sign of cancerous deposit.

Dr. HUME: But was the gland in that case also examined. In one of my own cases there were no cancer cells in the nipple itself, but the growth was abundant in the gland.

Dr. DRUMMOND: I have not had an opportunity of examining the gland.

Dr. MORISON: I have had a case under observation for two years of eczema of the breast. The eczema lasted for about a year, when it was cured, and since then there has been no return, nor has there been any development of malignant growth.

Dr. ARNISON: I think that Dr. Hume only advises one in a case of eczema of the nipple to look out for what may follow.

Dr. HUME: I would make a difference between eczema of the nipple and eczema of the breast. The eczema of the nipple, which is part of a general eczema of the breast, may be a harmless thing enough, but it is the eczema which begins in the nipple, and is sharply and clearly confined to it, that I look upon as dangerous; and in such a case I would certainly say anticipate by operation the formation of a malignant tumour. Dr. Chambers reports a case of eczema of the nipple cured by glycerine and laudanum; but, in my opinion, that was a case of general eczema. The excellent drawings, which I have been enabled to show in illustration of my paper, were executed by Messrs. Baigent and Steenberg, two students of this hospital.

NOTES ON "SEVENTEEN CASES OF VESICAL CALCULI."

BY J. RUTHERFORD MORISON, M.D., F.R.C.S. Edin., Hartlepool.

GENTLEMEN,—Here are seventeen specimens taken by operation from fifteen bladders. Thirteen of them were removed from the male bladder, and two from the female. Of the male cases eleven were cut, and two crushed. One of the lithotomies, a boy whose case I shall afterwards mention, was done by my brother, the rest are my own collection. The youngest patient operated on was two years, the oldest seventy-four. Of the whole series three died —two after lithotomy, one after lithotrity; and whilst showing you all the specimens in my possession, I will only mention such of them as are possessed of any unusual history.

The fifth on my list was a boy eleven years of age, from whom this specimen was taken. At the age of four he began to suffer from symptoms of stone, which increased in severity till sixteen months ago. Suddenly, after excessive pain, his symptoms disappeared, and for a year he was free from trouble of any sort. Four months ago (that is before the operation), he began to feel his old symptoms returning. They gradually increased in severity, till for two months before the operation he was obliged to remain in bed, propped with pillows, as he could not lie down. His urine constantly trickled away, his sufferings were continuous, and the least movement seemed agony to him. He is a pale, emaciated, sickly-looking boy, with rachitic bones, and a nearly bald head, who whines continually, and cannot bear even to be looked at.

After giving him chloroform a sound was passed, and grated on a stone, just as if on entering the bladder. A finger in the rectum detected a stone projecting as far forward as the internal sphincter. The staff introduced previous to operating grated in the same way as the sound, and could not be moved with the same freedom as in an ordinary case after having reached the bladder. The knife came in contact with the stone when being pushed onwards in the groove of the staff, as in the ordinary lateral lithotomy operation.

My finger, introduced through the wound, entered a cavity, lined with calcareous matter, as large as the bladder, but lower down than it would be found in a boy of eleven. The stone was felt projecting into this cavity, but another portion enclosed in a sac pointed to the perinaeum, its tip reaching as far forward as the triangular ligament. The projecting portion was first seized, but being very soft it broke in the forceps. The encysted part was then, with some difficulty, detached, pushed back into the cavity, and withdrawn by the forceps. The whole stone formed a dumb-bell, the one knob being the well-developed calculus, which

you see in section here, the other knob being represented by the softer and more recent portion, which has been very much broken up by handling. Again introducing my finger, I found at the further end of the cavity the entrance to the bladder, further from the perinæum and more abdominal than usual ; but dilating it easily, I found the bladder healthy, and its walls soft and smooth. A Clover's apparatus was now used to get rid of the debris and adherent matter, and the operation completed by inserting a drainage tube. This case must be a rare one, as I cannot find mention made of anything similar in all the surgical works I have consulted. If the patient had been an old man the condition would not have been so remarkable, as various similar cases are mentioned under the name of prostate vesical calculi. The most probable course of events was, I think, that a small calculus passed down from the kidney into the bladder, where it gave rise to symptoms for more than five years. During severe straining it passed from the bladder into the dilatable prostatic urethra. It was prevented by the narrowest part of the canal (except the orifice), that is where the urethra passes through the posterior part of the triangular ligament, from going further, caught in the sinus pocularis (which was dilated in consequence) and pushed forward and downwards by the stream of urine so as to make the stone appear encysted. Here it remained quiescent for a year, gradually acquiring fresh additions to the end sticking out. A dumb-bell was formed, and the prostatic urethra irritated, causing rapid phosphatic incrustation and dilatation of the urethra, as found at the operation. The child recovered well.

Here I may draw your attention to this other stone taken from Case 3, a boy æt 6, and ricketty. This stone, too, is a soft phosphatic one. Is this due to the diathesis?

Case 6.—A large oxalate of lime weighing 4oz., with phosphatic crust, removed from an old man, 72 years of age. At the time of the operation he was suffering from severe cystitis, and had frequent attacks of retention, necessitating the use of the catheter. The operation was done as a matter of necessity. The prostate was rigid, and on account of the size of the stone had to be incised on both sides. I do not think a much larger stone could be extracted by the lateral operation, as considerable force was required. The patient died exhausted from vomiting on the fourth day. No *post mortem* could be obtained. Perhaps a better plan would have been to drain the bladder from the perineum, leaving the calculus, as the patient was a worn-out, dying old man when the operation was done.

Case 7.—Large oxalate of lime from a man aged 40, who looked so ill that, on seeing him, my first impression was that he had entered the last stage of phthisis. His suffering was severe and

constant from eystitis, which had commenced four months ago and gradually increased. The layer of phosphates commencing to be deposited in the interstices of the stone show the presence of the cystitis. A little longer would have made it such another as the previous stone, if the patient could have survived. His recovery from the operation was rapid, but on getting up he discovered that on attempting to urinate most of the water passed into the rectum, and had to be got rid of as an enema. On examining him I found a hole (large enough for the point of my forefinger to be introduced) in the anterior wall of the rectum. Either I cut the rectum at the time of the operation, or it sloughed afterwards from some injury inflicted on it. If I did cut it I was unaware of it, but I do not believe that any rectum will slough from such injury as the stone could inflict in being removed; and to be honest, I think it must, therefore, have been cut. This is more likely to have happened, too, as the lower end of the rectum was much dilated in consequence of prolapse from pain. The fistula has never healed, but by some combined internal and external muscular effort the patient can pass all his urine by the urethra, and is so well satisfied with himself that he will have nothing further done.

The next case is the one to whom this calculus belonged, which was taken from a boy, $6\frac{1}{2}$ years old, by my brother. The patient was brought to me with a very much elongated œdematosus and narrow prepuce, and (his mother said) pain when he passed water. I at once circumcised him, passed a sound, and struck a stone. On passing my finger into the rectum I found my hand getting wet with discharge; and examining the perinæum, I found this to come from a sinus to the right side of the raphe of the perinæum and about the position of the centre of an ordinary lithotomy wound, except that it was opposite to the usual side. The discharge was evidently urine and pus, and a probe passed into the sinus went straight up to the stone. All the history we could get of it was that "a small lump broke there." The stone was obtained by the ordinary operation, and both sinus and wound healed.

The two crushed specimens are the result of four crushings done some years ago, before Bigelow's method had been introduced. They were done without chloroform. The first is from a patient, 72 years of age, who had at the time of the operations severe cystitis. He had three operations and was cured. The second is from a man, 65 years of age, and is the result of one crushing. The operation was performed at home; and the same evening, fighting with his wife, he went into the yard. This was followed by a rigor and pneumonia, of which he died on the 14th day. No *post mortem* could be obtained.

This specimen (an inch of broken cane knitting needle) was

taken from the bladder of a woman 35 years of age. After trying ineffectually to remove it with forceps, I had to dilate the urethra, and then got it out.

The next specimen, a phosphatic stone, the size of a hazel nut, was taken from the bladder of a girl 5 years of age. It was caught with a long pair of uterine dressing forceps, and removed by steady traction. The urethra was slightly lacerated on its upper wall. Both these patients were well next day after operation.

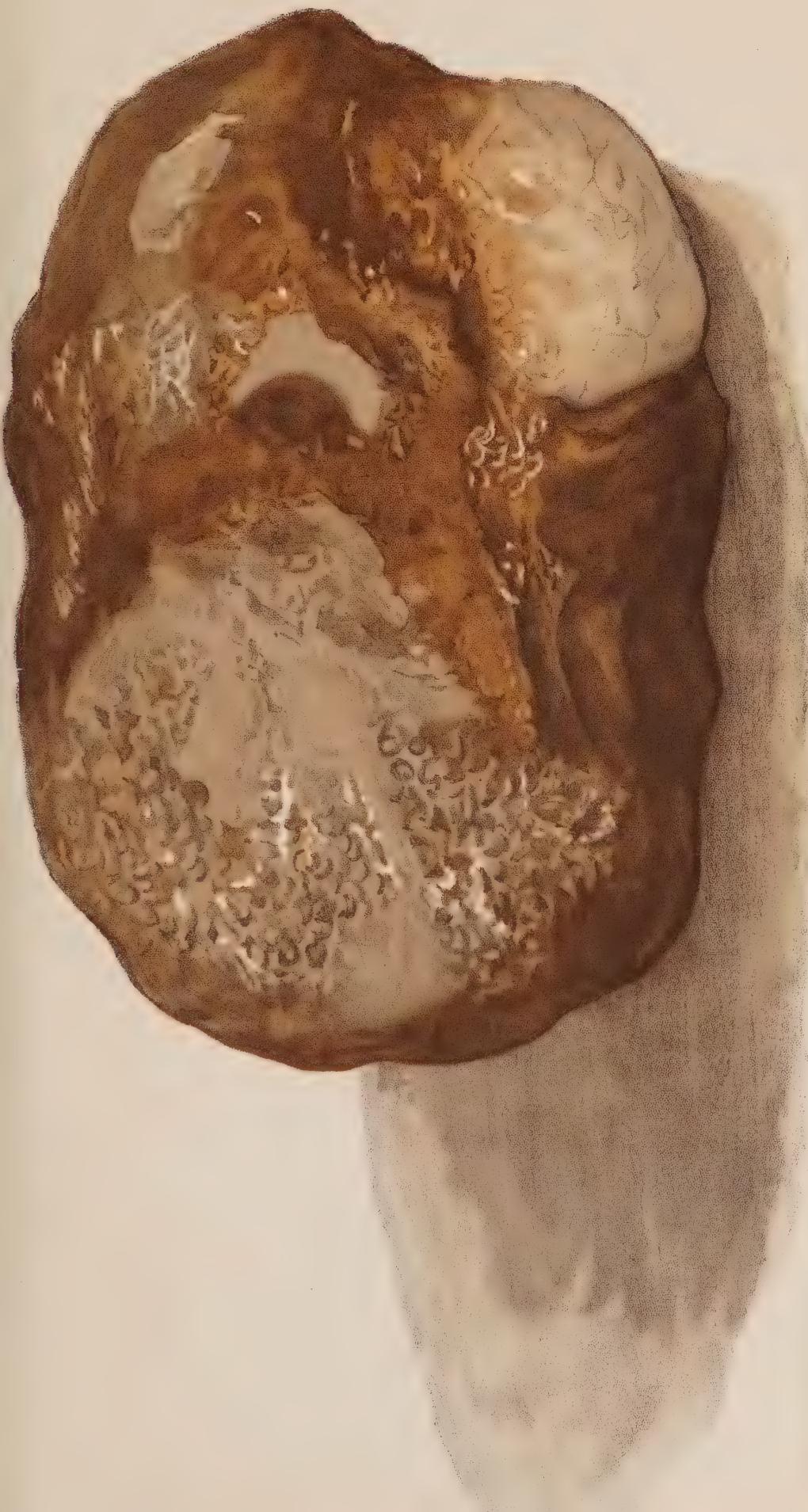
AN EXTRAORDINARY STONE—(*See Plate*).

T., æt 52, married, a seafaring man, residing at West Hartlepool, complains of pain and difficulty with his water. His general health has been good, with the exception of the trouble complained of. He has been somewhat addicted to alcoholic excess. He looks a strong man, but much worn by pain and loss of rest.

History.—For the last 30 years he has had attacks of pain and difficulty in micturition. He thinks that an accident, a fall on the perinæum over a railing, which he met with when a boy, may have been the cause. During the attacks he has had a frequent desire to micturate, accompanied by straining pains in the perinæum and rectum, and a shooting into the end of the penis. These attacks lasted a variable time, occasionally passing off in a few days, at other times requiring months. He says they had to reach a height, after which followed a gradual return to health, and for a time he remained perfectly well. Several years ago, during one of the attacks, he passed blood with his urine. At different times he has consulted a variety of physicians and surgeons, but nothing did him any good except morphia, which relieved his pain. He has been frequently sounded for stone, but without result.

His present attack began four months ago in the usual way, with painful and frequent micturition, for which, up to the time of my seeing him, he has been under medical care, and steadily getting worse. At the time of my first seeing him I was going away for three weeks, so, on examining his urine and finding it to contain one-third albumen, some pus, and to be of low specific gravity (1008), I ordered him to live on milk, and take 15 ms. of tr. ferri perchlor three times a day, postponing any instrumental interference till my return.

On August 14th, three weeks having expired, I again visited him. So far as can be ascertained, all his organs are sound with the exception of his genito-urinary system. He is wearing a urinal, as his urine is constantly dribbling away. As a consequence his thighs are excoriated, and he has a strong urinous odour. On palpation a rounded swelling can be felt in his lower abdomen, reaching midway between the umbilicus and pubis, which is dull



PURE URIC ACID CALCULUS : REMOVED BY DR. MORISON BY THE SUPRAPUBLIC OPERATION.

Exact Size: Weight=1lb. 6oz. 6dr.

Measurements= { Long Circumference, 12 inches.
{ Short do. $9\frac{3}{4}$ inches.

on percussion, and pressure on which causes a desire to micturate and the escape of some urine by the natural channel. Pressure over both kidneys, posteriorly, causes pain. Per rectum, a round, hard, tender swelling is easily felt, projecting into the lower part. A soft rubber catheter enters as far, apparently, as the prostatic urethra, but here it hitches, causing great pain, and about a teaspoonful of urine escapes in little gushes. The catheter will not enter the bladder. I arranged to give him chloroform the following day and make a thorough exploration.

August 15.—On giving chloroform, the distended bladder could be distinctly felt as a rounded swelling in the lower abdomen. A soft Coudeé instrument struck at the same spot as the one introduced yesterday, and no more water could be obtained through it. A silver catheter, now tried, struck a stone at the point of obstruction lying in the urethra, and could not be passed beyond it. I arranged to make an incision, and by that means empty his bladder next day.

August 16th.—The staff, when introduced, hitched on the urethral calculus, but passed on into the bladder, where it struck another calculus. The ordinary (as for lateral lithotomy) incision was now made and bled profusely from the whole surface. The transverse perineal artery was so active as to be formidable, and a Pean's forceps were fixed on each end. When the urethra had been incised, this small flat stone escaped into the wound, and was extracted with my finger, which was then passed into the bladder on to the stone there, and the staff was removed. The stone was of such large size that I enlarged the wound in the bladder with a probe-pointed bistouri before introducing the largest size of lithotomy forceps. Expanding the forceps widely, I grasped the stone, which was so large and of such a shape that they slipped off. After repeating the process in a variety of directions, it was plain that the stone could not be removed through this incision, and that if the stone was to be had it must be by the supra pubic operation. The wound had all along bled profusely from its whole surface, and by this time the patient had lost at least a pint of blood. A sponge was packed into the perineal wound, the supra pubic incision made, and the bladder opened above the pubis on the stone, a matter of little difficulty, as the stone was pushing forwards the anterior bladder wall. The incision in the skin was extended upwards for about four inches from the pubic bone, the bladder wall being opened for about two inches up to the reflection of the peritoneum. The lithotomy forceps were again introduced, but had no power and slipped. There was the same difficulty as before. The midwifery forceps of a neighbouring practitioner were now sent for, and on their arrival one blade was introduced at a time, as in an ordinary instrumental

delivery. The entrance of the first blade was followed by a gush of putrid urine, which escaped over the abdominal wound, and must inevitably have run into the peritoneal cavity if it had been opened. This urine, about 2 oz., was lying in the base of the bladder, under the stone, and at a lower level than the urethral opening. The forceps being locked, the stone was easily removed by slow and gentle traction, the wound in the bladder expanding without laceration, and no further obstruction being encountered because of the long incision through the superficial soft parts. The bladder wall was very much thickened and the lining membrane so vascular that it bled freely. Lying at the lowest part of the bladder was this small flat stone, which was now removed.

The operation was completed by the introduction of two deep and three superficial sutures of catgut into the abdominal wound, leaving only the lower half open, by stitching a full-sized drainage tube reaching the bladder into the perineal wound, by flushing out the bladder and wounds with lotio boracic, and finally by the introduction of a large sponge with Peañ's forceps attached into the bladder to stop the oozing from its interior still going on. The operation occupied three-quarters of an hour, including the delay occasioned by having to send for forceps.

An hour afterwards, the bladder sponge was removed by means of the Peañ's forceps, which were left attached, and all bleeding had ceased. The patient had a fair pulse, but had not yet rallied from the cold, chloroform, and shock.

AFTER PROGRESS.

August 16th, evening.—Fair pulse 110, temp. 97. Has not yet recovered from shock, and is inclined to be cold. Hypodermic injection of $\frac{1}{6}$ th gr. of morphia, and some hot milk and water.

August 17, morning.—Temp. 97°. Hands still cool, but body warm and perspiring. Has had a good night; slept three or four hours, and taken freely of milk without sickness.

1 p.m., t. 97·6, p. 112; 3·40 p.m., t. 99, p. 120; 10 p.m., t. 102·6, p. 160. 10 grs. of quinine, 10 grs. of pulv. ipecac co.

August 18, 1 a.m.—T. 100·2, p. 140; 8·20 a.m., t. 97·4; 3·20 p.m., t. 98·8; 8 p.m., t. 99, p. 117.

After this his temperature only once reached 100. For several nights he required morphia to make him sleep, not because of pain, but restlessness.

August 19.—Most of the urine escapes by the abdominal incision, in spite of the fact that the perineal tube is large and patent. The tube removed in consequence. Secretion of urine very free, and has been ever since operation. To-day he took a

quantity of egg flip, looks much better, but his tongue is dry, and he is disposed to hiccup. Ordered calomel gr. i. every four hours.

August 21.—His pulse occasionally intermits and has kept up to about 120 since operation. Ordered tr. digitalis, m. 10, every four hours. Tongue much cleaner. Asked for and relished some tea and toast.

August 22.—Most of the urine escaped through the abdominal wound ; and a tendency, apparently, for it to find its way into the urethra has caused some pain. I passed a full-sized drainage tube through from perineal to abdominal opening, and ordered bladder and tube to be syringed out from above every four hours with lotio boracic. Patient seems very well and strong, pulse 100. Temp. normal, but cannot sleep well at nights. Urinary secretion very free.

August 27.—Is very well and strong. Upper part of abdominal wound healed, lower part granulating, and both it and perineal wound have closed in so as to embrace drainage tube. His diet has been gradually improving, and to-day he was allowed to have to dinner chicken with vegetables, pudding, and a glass of beer. After dinner he enjoyed a smoke, and was anxious to know if he could soon get up a little. Was in excellent spirits about himself.

August 28th, morning.—Looks rather depressed, and says he does not feel in such good spirits. Has had occasionally hiccup, but as his pulse is good, temp. normal, wounds look well, and secretion of urine free, no importance was attached to it ; as even when fairly well, for some months he has had it occasionally.

Evening.—Hiccup much worse, never lets him rest. Tongue dry. Pulse 120, temp. 98·4. Very thirsty. Drowsy looking and low spirited. Says he is going to die. Hypodermic, morphia, and a variety of other things tried.

August 29th.—Hiccup never ceases. Has been delirious all night, wanting to get out of bed, &c. Died early in the morning. No *post mortem* can be obtained.

ON SOME FORMS OF POLIO-MYELITIS, OR INFLAMMATION OF THE GREY MATTER OF THE SPINAL CORD, IN THE ADULT.

By DAVID DRUMMOND, M.A., M.D., Physician to the Newcastle-on-Tyne Infirmary, &c., &c.

In a communication made to this Society, a few months ago, I called attention to the lesion which would appear to underlie that very common affection in children, acute polio-myelitis, and ventured to suggest that the inflammation was not limited essentially to the groups of ganglionic cells in the anterior cornua, though these important structures suffered most. In the present paper it is my intention to discuss shortly the somewhat similar condition in the adult, and with that object have selected, as examples, four cases which appear to me to be worthy of special notice. For the notes of Case 1, I am indebted to my friend Dr. Crisp, of South Shields, who kindly afforded me the opportunity of examining the patient.

Case I. George G., aged 35, a sailor, began to complain, after extreme exposure, of numbness in the legs, especially the left, on the night of Monday, the 4th of February, 1884. On the following day he was able to go to sea, though he still felt his legs numb and weak, and that night the paralysis developed. He was seen by Dr. Crisp on Wednesday, the 6th of February, who found him in the following condition: patient looked ill and was feverish (T. 100°); there was complete motor paralysis of the left leg and partial of the right, but sensibility was not impaired; the urine was retained. In two days the motor paralysis of the right leg had become complete. On the 10th of February, six days after the commencement of the attack, it was observed that touch and painful impressions were abolished on the left side up to the gluteal fold. On the following day there was anaesthesia of the right leg. The paralysed muscles now began to waste. On the 17th of February the temperature ran up to 103°; after this date the bladder symptoms became more troublesome, and constant dribbling occurred, with signs of cystitis. On the 22nd it was observed that the anaesthesia had risen to about the umbilicus. On the 24th bedsores made their appearance over the sacrum, and the patient died on the 28th. In the opinion of Dr. Crisp, the cause of death was septicæmia, from severe implication of the bladder. The paralysis never ascended to the upper extremities, and the respiratory muscles remained free to the end. At first the patella-tendon jerk was active, but it gradually disappeared, and was absent on the 24th of February. Ankle clonus gradually developed, and was markedly

present about the 16th day of the attack, but disappeared later. From the first the plantar reflex was lost. At no time was there a girdle sensation present. The muscles were not subjected to any electrical test. Dr. Crisp was permitted to make a *post-mortem*, and kindly sent me the spinal cord. At the *post-mortem* it was observed that the legs were very markedly wasted. Before describing the spinal lesion, permit me to refer to Case II., which presents a clinical picture very similar to that which I have just described, but, unfortunately in this case, I was denied a *post-mortem* examination.

Case II. Susannah E., aged 46, married, was admitted into the Infirmary on September 28th of the present year, complaining of paralysis and numbness of the lower extremities, of six days' duration. Her family history was good, with the exception of the fact that her mother and two sisters had suffered from asthma. Her own health had been good until six or seven years previously, when an ovarian tumour developed. Ovariectomy was performed by Dr. Luke Armstrong, and she made a good recovery. In April, 1885, she had her right breast removed in Germany for a tumour, the nature of which we could not determine. After the operation her health was restored, and she left Hamburg about the 18th of September for Newcastle, and experienced a very rough and unpleasant passage, which lasted two days and three nights, during the whole of which time she was sea-sick. She arrived in the Tyne on the night of Sunday, the 20th September, much exhausted. As the vomiting continued through the night she went on the following day as a casual patient to the Infirmary to seek relief; whilst sitting in the out-patient department, waiting her turn, she experienced a rigor, but was able to walk home, a considerable distance. Feeling ill through the night she rose from bed, and then discovered that she had, in a great measure, lost the use of her legs. Next day the legs were more powerless still, but she observed no subjective sensation of numbness, needles and pins, &c. Bladder symptoms made their appearance very early, and on the second or third day of her illness the sphincter became relaxed. She was admitted to hospital, as already stated, on the 28th of September, a week after the commencement of the attack. It was then observed that there was almost complete motor paralysis of both legs; the only power remaining was exhibited in slight movements of the toes of both feet, and in addition she could flex the right knee slightly and draw up the foot about three inches. Tactile, painful, and thermal impressions were conducted normally. She had no control over the bladder, the urine dribbled constantly away. The plantar reflex was lost on both sides. The knee jerk was present at first, but it soon disappeared. The temperature was 100° , and the pulse was rather weak but regular, and

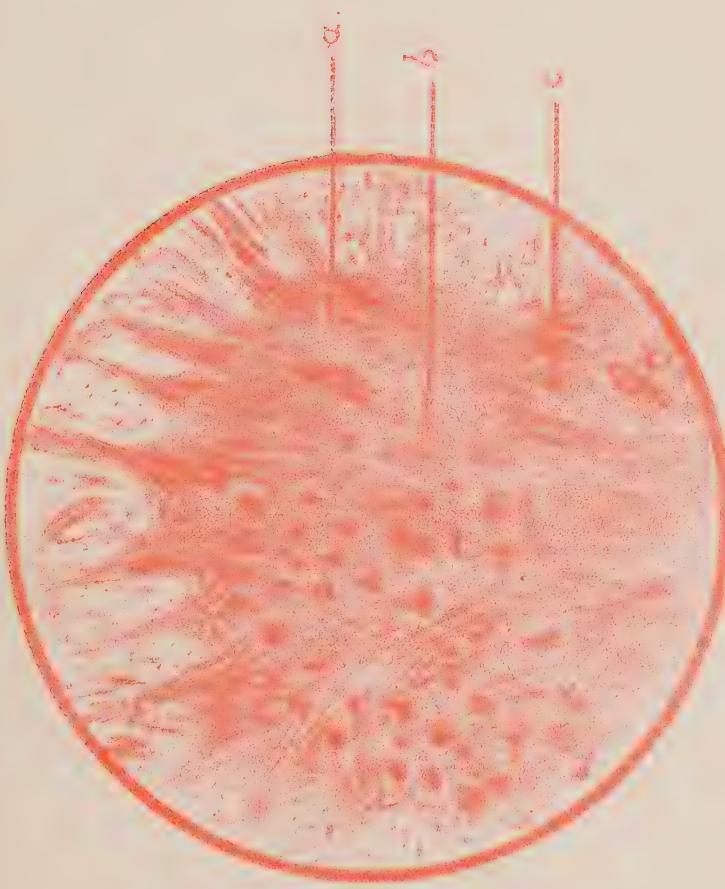
slightly increased in rate. There were no bed sores. The urine was acid, and without pus or mucus. On the 5th of October the legs were analgesic and anaesthetic below the knees; the motor paralysis about the same, but the paralysed muscles considerably wasted; and redness, with a slight abrasion of the skin over the sacrum, was observed. On the 8th of October she began to menstruate, a function which had been in abeyance for two months, and at this time cystitis developed. The urine, drawn off by the catheter, was bloody and alkaline. The patient's general condition now became much worse, but the upper limit of the paralysis remained practically unaltered. The wasted muscles showed the reaction of degeneration when tested electrically. About three weeks after her admission, and a month from the beginning of the attack, her husband insisted upon taking her home, though warned of the danger. She was in a very weak state and quite unfit to be moved, and she died on the day following her removal home. As in the first case, the fatal result appeared to be due to the exhaustion arising from the bladder complication, for the paralysis never ascended to the upper extremities. The temperature throughout varied between the normal point and 101°. The bowels were constipated and had to be moved by injections; the rectal sphincter was relaxed. She frequently complained of shivering and of the feeling of cold and numbness from the knees downwards. The red and broken skin over the sacrum never sloughed.

It will scarcely be necessary for me to emphasize the points of similarity in these two clinical histories. Both patients were middle-aged adults; in each a history of exposure and cold, rapidly developed motor paralysis of the lower extremities, with little or no backache, and at the beginning an absence of sensory paralysis; early loss of plantar reflex, gradual disappearance of the knee jerk; later, bladder affection, anaesthesia, wasting of the muscles, and death.

Although no *post-mortem* was made in the case of S. E., I have no doubt that the lesion was almost the same in nature and situation as in the case of Dr. Crisp's patient. In this case, sections of the lumbar enlargement of the cord in the fresh state revealed to the naked eye a full and swollen condition of the grey matter, which stood out prominently above the level of the surrounding white texture, and was of a reddish salmon colour. Portions were hardened in bi-chromate of ammonium, and the sections were stained with carmine and mounted in Canada balsam (fig. I.). The posterior and lateral white columns and posterior roots were quite normal. The vessels entering the anterior horns through the white columns in front were much enlarged and were distended with corpuscles, especially the branches of



A. The Transverse Anterior
Cavities of the Spinal Cord.
The central grey matter has disappeared.



B. The Transverse Anterior
Cavities of the Spinal Cord.
The central grey matter does not disappear.

To ILLUSTRATE DR. DRUMMOND'S PAPER ON "POLIO-MYELITIS IN THE ADULT."

the internal and external anterior root arteries. These branches, in some places, were like large trunks. In the anterior horns the vascularity was also much increased. In most of the sections the cells of the internal group in the anterior horns had almost entirely disappeared, and those that remained were granular, and had lost their poles. The central group also had suffered in a similar way, and more especially those in the neighbourhood of the central grey matter, which in every section was more or less disintegrated. This alteration in the cells and central grey matter became less and less apparent as the dorsal region was approached. In the lower part of this region, the ganglionic cells were seen to be normal, but the vessels in the anterior columns were still greatly enlarged, and in some places distinctly thrombosed, minute haemorrhages being found in their neighbourhood. The axis-cylinders of the anterior roots, especially where they came off from the degenerated groups of ganglionic cells, were markedly hypertrophied.

In connection with these cases, which proved fatal, the following (Case III.), in which a good recovery took place, is interesting:— Frederick D., aged 30, a butler, was admitted into the Infirmary during the summer of the present year, on the recommendation of my colleague, Dr. Arnison. His family history revealed nothing of importance—one brother died of pulmonary consumption. The patient stated that he was a temperate man, and had never contracted syphilis, but had thrice suffered from rheumatic fever. About five weeks before his admission he walked to Newcastle in the rain, for some miles, getting thoroughly wet. Without any change of clothing he went in the train to Hull. In a few days he experienced numbness in the legs, and in a very short time—two or three days—they became almost completely paralysed. At the time of admission both legs were markedly paralysed and wasted; he could not stand without assistance, and had just sufficient power left to enable him to draw up and push down the legs feebly. Sensibility was not affected. Plantar reflex was absent. There was no knee-jerk. The bladder and rectal functions were performed normally. There were no bed sores. The paralysed and atrophied muscles reacted very slightly to the interrupted current, a strong current being found necessary to produce even a feeble contraction. The patient was given large doses of iodide of potassium, and the interrupted current was employed to the paralysed muscles daily. He improved by degrees, the power returning and the muscles increasing in bulk, and in about two months he was able to leave the hospital, though not perfectly restored, to undertake again his duties as a butler. I have since seen him, and the improvement is still continuing, though there yet remains considerable evidence of the attack. Of the nature of this case there

could not be much doubt, and I feel sure the lesion was an acute inflammation of the anterior horns, affecting certain groups of the ganglionic cells, though only disabling them temporarily, but to this point I shall return.

Case IV. Dorothy A., aged 50, single, a mantle-maker, was admitted into the Newcastle Infirmary, some time ago, for paraplegia and exophthalmic goitre. The patient was a twin, her sister living until she was thirteen. Her family history was good. She had always been reputed delicate, and especially since the age of 21 had been reached, the period she took to dressmaking. Her most important troubles had been palpitation and dysmenorrhœa, for which she frequently was confined to bed for a few days at a time. Menstruation ceased when she was forty-eight. About six months before her admission to hospital, she complained of severe dyspepsia and vomiting, and at the same time a swelling appeared in the neck, which has since gradually increased in size. She became exceedingly nervous and debilitated, the palpitation increased, and she was compelled to take to bed altogether. She was thus kept a prisoner for upwards of eight weeks, when the attempt was made to get her up. It was then observed that the lower extremities were helpless, or almost so. She stated that she had noticed them becoming gradually weaker a few weeks earlier. When admitted she was seen to be a good, though by no means exaggerated, example of exophthalmic goitre. The eyes were prominent, the thyroid full and pulsating, and the heart rapid and excited. The lower extremities were markedly paralysed and wasted ; the knees were slightly contracted, and it was impossible to extend the legs fully without great pain. She could flex and extend the legs feebly, though the movements were limited by the knee contraction, and she could flex and extend the feet at the ankle with more force than is usual in such cases. There were no pains complained of, indeed sensibility was practically normal. The reflexes were entirely abolished. There were neither bladder nor rectal disturbances, nor was the nutrition of the skin altered. The paralysed muscles were scarcely affected by the strongest interrupted current ; the upper extremities were not impaired. After a stay in hospital of about five weeks, without altering much for better or worse, the patient somewhat suddenly became more profoundly paralysed in the lower extremities, and her general condition grew correspondingly worse. She became prostrated and sank rapidly, and died in two days from the onset of the more grave symptoms, without developing paralysis of the arms or respiratory muscles. Unfortunately I had not an opportunity of examining her during this brief period.

In describing the results of the *post-mortem* examination I shall confine myself in the present communication to the observations relating to the paraplegic condition alone. The body, with the

exception of the lower extremities, was remarkably well supplied with adipose tissue; the layer of fat covering the abdomen was at least an inch-and-a-half thick. The omentum was thickly laden with fat. The sternum was so soft that it could be broken readily with the fingers and cut with the knife. The arches of the vertebræ were in a similar condition. Even on the lower extremities there was more fat than usual in such a case, though the muscles were very much reduced, for practically the limbs were nothing but fat and bone. The brain was soft, but otherwise showed nothing remarkable.

The spinal cord was removed with great ease owing to the softened condition of the posterior arches or laminæ. The lumbar enlargement and lower dorsal portion were firm to the touch, especially the former, but the upper dorsal and cervical were very soft indeed; the spinal marrow in the middle and upper dorsal regions was almost reduced to a white creamy substance, which on section seemed to conceal the grey matter, so that there was simply a depression left to mark its place. Section through various levels of the firm lumbar enlargement showed the grey matter, which appeared to be raised above the level of the section, to be redder in colour than usual.

Microscopical sections of the lumbar enlargement (for the dorsal region defied the hardening process) showed a limited but pronounced change in the anterior grey horns (*vide* fig. II.). The central grey matter and the white columns were normal. The internal and anterior groups of cells had almost entirely disappeared, whilst many of the cells in the other groups had lost their processes. The anterior root fibres leaving the grey matter in the region of the affected groups of cells were deeply stained and very distinct; the whole of the anterior horn was unusually vascular.

It will be apparent that Cases I. and II. resemble very closely the so-called acute central myelitis of most writers on spinal disease. Such cases have been described in a more or less general way by Sir Wm. Gull in 1858, by Ollivier at a still earlier period, and by Ross and others more recently in a more accurate manner. But in true central myelitis, if we can suppose a disease with a pathology distinct from lesions of the neighbouring cornual ganglionic cells, sensory disturbances are said to make their appearance at the outset, and, indeed, to initiate the group of symptoms—motor paralysis and wasting following in rapid succession upon the paræsthesiæ, anaesthesia, &c. And again, in acute central myelitis the lesion ascends rapidly, as a rule, and engages the upper extremities, respiratory muscles, and medulla—producing difficulty in articulation and deglutition, and destroying life by asphyxia. It would be absurd to deny that the inflammation is ever confined to the central grey matter, but I confess I am strongly disposed to

think that in the great majority of cases it embraces also the adjacent ganglionic cells, and that many of the clinical features of the disease are to be accounted for on this assumption. There is, I think, a good deal to be said in favour of the view that acute and sub-acute inflammations of the spinal grey matter are usually much more diffuse than neural pathologists have supposed, though one part may suffer much more than another. It has been shown, for example, that in acute anterior polio-myelitis in the infant, the inflammation may spread even into the posterior horns, though it spends its force upon the cells in the anterior region.

Case III., as I have already remarked, can only be regarded as an example of acute or sub-acute (for the terms are necessarily arbitrary) anterior polio-myelitis, as it is met with in the adult; and the inflammation, as is often the case, would appear to have stopped short of an absolutely destructive lesion, being just of sufficient degree to disable in a temporary way.

Case IV. is an example of chronic (or sub-acute) anterior polio-myelitis, or atrophic spinal paralysis as some writers prefer, though in some respects it differs from the description given by Duchenne of that disease. In the first place, the muscles which flex the foot at the ankle were not affected in the case of Dorothy A., whereas in chronic atrophic spinal paralysis they are usually the first to become paralysed. In the next place, the knees were somewhat contracted, a condition which seldom obtains in the affection Duchenne described. Notwithstanding these points of difference, the result of the microscopical examination left no room for doubt as to the nature of the lesion, and the case serves to demonstrate the fact that the assertion that the legs are always flaccid and freely admit of passive movements cannot entirely be relied upon. The condition of the spinal cord in Case IV., above the position of the chronic lesion, was remarkable. I have seen the same event happen before, viz., the supervention of acute general softening in the course of a chronic and apparently stationary lesion of the lumbar enlargement; but though the cord was examined, it was so soft that it was found impossible to cut sections as in the present case.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

SESSION 1885-86.

DECEMBER MEETING.

THE THIRD MONTHLY MEETING of the Society was held in the Library of the Newcastle-on-Tyne Infirmary, on the evening of Thursday, December 10th. Dr. Fielden (President) occupied the chair, and Dr. Powell and Mr. Norton, of London, were present as visitors.

NEW MEMBERS ELECTED.

Hugh Frazer Hürst, L.R.C.P., L.R.C.S. Edin., Walker.
Mr. McCullagh, M.R.C.S., Bishop Auckland.

NEW MEMBERS PROPOSED.

Samuel McBean, L.R.C.P., Jesmond Road.
David W. Inglis, M.D. Glas., Jarrow.

CASE OF EXCISION OF THE KNEE.

Dr. ARNISON: I am sorry that, after using every endeavour, I have been unable to find the boy whose case I wished to bring before the members this evening. It was a case of excision of the knee, and the method of operation was by a straight incision across the knee, then sawing through the patella horizontally to expose the joint. The diseased portions of the articular surfaces were then removed, and the patella brought together by wire sutures. The boy did well after the operation, though ankylosis did not take place, and he left the hospital with a moveable joint, which was supported by a splint.

Dr. LUKE ARMSTRONG: I did an excision in the method referred to by Dr. Arnison. The boy did well, though one or two trifling sinuses formed. The wires in my case ulcerated through and were removed; but union of the patella took place, and the boy left the hospital with a good useful limb, though not a moveable joint.

Dr. GOWANS: What is the meaning of this operation? Are we to understand that the flail-like movement obtained in Dr. Arnison's case is preferable to a firm, ankylosed joint?

Dr. HUME: In Langenbeck's Surgical Archives there is an elaborate paper written with the object of proving that in excisions of the knee, a moveable joint should always, if possible, be obtained. The writer cites a case of Annandale's, which that surgeon had at the time regarded as a failure, but after a year or two the patient presented herself with a moveable joint, perfect in every respect.

Dr. ARMSTRONG: In my case I was very glad to get union. The case was a very bad one, and the patient a hopelessly strumous subject.

Mr. NORTON: I cannot speak from experience on the value of the operation recommended by Dr. Arnison, as in London we do not often leave the patella. In leaving the patella, I think the surgeon runs certain risks. Something may go wrong with the patella, and then your operation is a failure. Speaking for myself, I should not care to adopt the practice of leaving the patella without further evidence in its favour. I admit that if one could get just sufficient movement to be acted upon by the muscles, it would be very desirable; but with an uncontrollable flail-like joint, I think you fail in the best results of your operation.

Dr. PEART: I would ask Dr. Arnison if there is any lateral movement in the joint in his case, and has the boy a safe leg to stand upon?

Dr. ARNISON: I should like to say that I had got out of love with this operation of excision of the knee, until I began to do it in this way. I know of no other operation by which the joint is so easily opened and everything clearly laid before you. After cutting through the patella, and opening the joint, you have simply to clean the ends of the bones, removing the diseased portions. If the patella is diseased, remove it certainly, but if it is not diseased, I think that its salvation is a most important point gained. If you have an amount of movement which may not completely extend the leg, you gain something in flexion of the thigh, in which I think the patellar ligament takes some part. I was the first, I think, to perform this operation in this Infirmary, and I used wire sutures, while my colleagues use stout catgut. Dr. Gowans asks what the advantage of this operation is, and I hope I have answered that. The operation is easier than any other, and if the patella is sound, as it was in my case, its retention is an important matter to the patient. I look upon the movement obtained as a fluke in most of these cases, however. I candidly admit that I aimed at ankylosis here, and was a little surprised when I discovered, during the after dressing, that I had not got it. There is some lateral as well as antero-posterior movement in the

joint, and the leg is not at present strong enough to support the lad's body; but I believe that in time he will have a leg able to support his body and get about with. At present the joint is supported by a splint, and even if some light kind of splint should become a permanent necessity, I think my patient would be better with that and a certain amount of movement, than he would be with a stiff knee.

Dr. FIELDEN: Dr. Arnison has, I think, made out a good case. I have never performed the operation myself, but have frequently seen the good results of it as performed at this hospital.

A CASE OF MULTIPLE EXOSTOSES.

Dr. HUME: This boy presents some interesting peculiarities, to which I desire to call your attention. In the first place, there is what I think I may safely call a congenital dislocation of both bones of the left forearm. It was not noticed at his birth, but was observed in his very early infancy. On almost every bone of this lad's body are to be found exostoses. On his right humerus there was this large exostosis which I show, and on account of which he was first brought under my observation. It interfered with the movements of his arm, and as the time must come when the boy must earn his livelihood by manual labour, his parents deemed it advisable to have the growth removed. The growth was covered by a portion of the deltoid muscle, and grew by a narrow neck from the posterior aspect of the bone, the diameter of the tumour being transverse to the length of the bone. The growth was easily enough removed, except that the musculo-spiral nerve was stretched over it. The patient has a corresponding exostosis on the left humerus, though not nearly so large; and he has one on each femur, just above the internal condyle, while on the upper internal aspect of each of the tibiæ are other growths about the size of hazel nuts. These tumours are not growing from the epiphyses, as one naturally expects, nor from any ossifying centres, except those over the condyles. Neither is there in this case what one so often finds—a history of heredity. None of the other members of the family have been so afflicted, and every one knows that a family history of exostosis can often be found in the patients suffering from this disease.

Dr. OLIVER: Would Dr. Hume tell us what is the origin of these tumours?

Mr. NORTON: I have to congratulate Dr. Hume on the result of his operation. I have seen a few of these cases; indeed, some time ago, I had one very much more marked than the one at present before us. In my case I think the growths were hereditary. I do not think that syphilis has anything to do with these bony

tumours, although syphilis has much to do with periosteal growths. In my case the growths were very much larger, but the patient was not greatly inconvenienced, except by one on the femur. I do not like to touch these cases, and in the one I speak of I refused to operate. The patient afterwards came under the care of a colleague, but I still objected to the removal. My colleague, however, did not see it in the same light, and proceeded to remove the great offender on the femur. It turned out during the operation that the boy had multiple abscesses as well as multiple exostosis, and we have now the specimens on exhibition.

Dr. ARNISON: This boy has a ricketty chest.

Dr. OLIVER: In regard to the origin of these growths, we know that from the inner layer of the periosteum large surfaces of bone are formed; and is it not possible to imagine that from some pathological cause certain limited areas of this osteogenetic membrane may take on unusual activity, and multiplying outwards, produce these tumours?

Dr. HUME: I think it is perfectly clear that exostosis is not the result of syphilis. I do not believe that syphilis exists in the case of the boy before you. Equally I think it does not arise from rickets. In the first place, the growth of multiple exostoses begins at a much earlier period than that at which rickets manifests itself. In the second place, there is no bending of the bones, as one nearly always finds in rickets. I think that Dr. Oliver, in his theory, has gone very near the mark. Look to the early development of the bone. An exostosis is always bone covered by a layer of cartilage, and it goes on growing until the cartilage becomes ossified, and then we have the typical bony tumour. I think, therefore, it is to the period when the bones are in the cartilaginous condition that we must look for the cause and origin of these growths, and not to the periosteum.

TWO CASES OF DISSEMINATED SCLEROSIS.

Dr. DRUMMOND introduced a case of disseminated sclerosis, and said: This patient shows some typical phenomena which cannot fail to be interesting to the members of this Society. He is 58 years of age, and has been twelve months ill. The point, however, to which I wish to call your attention especially is the tremor. He complains most of the difficulty he experiences in feeding himself and performing other delicate muscular acts. I give him here, for example, an empty glass, and you can see that though he has a considerable amount of tremor, he can yet convey the glass to his mouth. Now, when I fill the glass with water and ask him to lift it, you will observe that the tremor is very greatly exaggerated, and he cannot lift the

glass off the table with one hand without spilling the whole of its contents. He uses his left hand much better than his right, and when he uses both to take up any object, he does it much more steadily than he can with either hand alone. As he stands you will observe that there is little or no tremor, and it is only when he attempts any voluntary act that it becomes so very marked.

Dr. POWELL (London) : Can Dr. Drummond tell us anything of the habits of this man? Is he a heavy smoker, and what is the condition of his pupils?

Dr. OLIVER : In connection with Dr. Drummond's case, I would like to submit these specimens, which I removed from the body of a woman, 28 years of age, as illustrating a very different phase of the same disease. She first consulted me a year ago, complaining of staggering gait and distinct slowness of speech. I did not see her again until about six months afterwards, when it was apparent that she had had a change for the worse. She was confined to bed; had marked nystagmus; tremor all over on the least movement; greatly exaggerated tendon reflex; and she had lost control over her bladder. Very strange to say, at our next consultation all the tremor had disappeared; and during August and September last there was constantly shifting anaesthesia, which led us to suspect hysteria. The woman got steadily worse, and died. *Post mortem* we found very many disseminated patches of sclerosis in the occipital lobes of the cerebellum, corpus striatum, and optic thalamus of the right side. The pons exhibited the same sclerosid character. The case which Dr. Drummond has exhibited is one of great interest. The tremor is the only symptom complained of, and though I believe there is exaggerated knee-jerk, there is no nystagmus.

Dr. DRUMMOND, in reply, said: The patient's pupils showed nothing marked. There is no Argyle-Robertson phenomenon. He has been in the habit of taking alcohol pretty freely, and smokes four or five ounces of tobacco a week. It appeared to him that there were two distinct groups of cases of disseminated sclerosis usually met with. In one, the volitional tremor, one of the most characteristic symptoms, developed early, say in eighteen months, rendering the diagnosis easy. These cases generally ran a very chronic course—in one case the condition had been pronounced for about twenty-three years. In another group, again, the cases ran a more rapid course and the symptoms were less pronounced, and were much more difficult to recognise, the case being made up of a whole host of neurotic phenomena, many of which simulated hysteria closely, and often characteristic features were absent throughout

almost the entire case. These were the cases which, in his opinion, were so difficult to diagnose and prognose.

OVARIAN CYSTIC DISEASE.

Dr. HUME: The patient from whom I removed this specimen was a young unmarried woman, who suffered two years ago from what was believed to be an attack of gonorrhœa. She was treated for this, but from that time suffered from pain, growing more and more severe during her menstrual periods. It was at first over both ovarian regions, but latterly had localised itself over the right side, and was almost always present, and had made her a confirmed invalid. On examination over the ovarian region there was no distinct tumour to be felt, but the impression conveyed to me was that there was a fulness in the right iliac region beyond what there should be. *Per vaginam* the ovary could be felt, and behind it apparently a something more, but what could not for certain be made out. The finger simply gave the impression of something filling up the cavity, but too vague for more exact diagnosis. On account of the excessive and persistent pain I determined to perform oophorectomy. On opening the abdomen and drawing up the right ovary, there was found behind it a cyst (the size of a Tangerine orange) attached to its posterior aspect, and over the whole of the ovary there were studded smaller cysts. The cyst was not an ovarian cyst properly so called, but was a hæmorrhagic cyst, its walls inside being lined with flocculent clot. The appearance of the specimen now conveys no idea of what it was like at the time of operation. It was, as I said, about the size of a small orange, and its walls were exceedingly thin, which would account for the indistinct feeling it conveyed to the exploring finger. The ovary itself was small and puckered, and had a cicatricial character. This condition of the ovary was due, I think, to the preceding gonorrhœa, and what took place in my opinion was this: The girl had a gonorrhœa; from that there followed ovarian irritation and congestion; the congestion passed into the chronic state of inflammation; from this we have by natural steps the state of cirrhotic contraction. The ovary then could not expand—hence the pain. These cysts again are properly graafian vesicles which have not ruptured, but have expanded up to a certain point and remained as cysts, and the hæmatic character of the larger one is explained by the rupture of a blood vessel into its interior.

In summer I had a case whose history was much the same as that of the foregoing. In that case I removed the ovaries, and found the same cicatricial appearances of the organs. The ovaries, I contend, were not healthy ovaries, and what I would like the opinion of the members on is this: are we justified in operating solely on account of pain in these cases? If the course of events

is as I have assumed, I think we are in some cases, where the pain is extreme, quite justified in performing oophorectomy.

Dr. GIBSON: I don't think there can be much difference of opinion in these cases. The pathology of the disorder is, I think, fairly illustrated by Dr. Hume.

Dr. OLIVER: I saw this case with Dr. Hume before the operation, and beyond the little fulness in the right iliac region, there was nothing to be made out, and I thought when the patient went to the operating table she was going there simply for the relief of pain. The walls of the large cyst were quite flaccid ; and this, I think, accounts for the absence of definite information at the examination. Dr. Hume, I think, invites opinion on how far we are justified in operating for pain. If ovaritis is the cause of pain, and this is the condition of the ovaries in all cases, then I think surgeons are justified in operating. Such a course would be all very well where only one ovary is affected, but what is to be done where both ovaries are affected.

Dr. GOWANS: I think any surgeon would be justified in operating in a case where the pain was so severe as it was in Dr. Hume's ; but I think that in many cases the seat of the morbid changes will be found not in the ovaries, but in the fallopian tubes. That is the opinion I hold, and it is also the opinion of Lawson Tait, whose experience ought to give it weight.

Dr. FIELDEN: Surgeons are, in my opinion, justified in at least exploring the condition of matters in cases presenting very severe symptoms. In most of these cases, I think, it is found that the women are sterile, so the question of maternity does not enter much into the calculation.

Dr. HUME: What I wished to have the opinion of members upon was : are we justified in operating for pain solely ? This woman's life was a misery to her, but the operation gave her perfect relief, and she menstruated afterwards with no more than what I may call a physiological amount of pain.

Dr. GIBSON: The ovary which Dr. Hume has shown us could have nothing to do with conception, and therefore could have nothing to do with maternity.

CASES OF PHOSPHORUS POISONING.

Dr. DRUMMOND showed the liver from a fatal case of phosphorus poisoning. On admission to the hospital the patient's breath smelt very strongly of phosphorus. He was very much collapsed, with a temp. below the normal ; his pulse quickly rose to 130 per minute. The temp. rose to 99 deg. before death, which occurred eight hours after admission. The treatment con-

sisted in active stimulation, with turpentine internally. The liver was removed the day after the man had taken the poison (which was in the form of what is popularly known as rat paste). Death had occurred too soon for the pathological action of phosphorus to be produced. There was no marked fatty degeneration, but small haemorrhages were found all over the specimen, which appeared yellow on section ; and we also found, under the microscope, that the hepatic cells were very granular, with abundant leucocytes scattered about the section.

Dr. ANDERSON : I have at present under my care a girl who made a solution of the heads of two boxes of matches, and the whole of this she drank between Saturday night and Sunday last. There was nothing wrong with her apparently during Saturday and Sunday. She only complained of a pain in the stomach, relieved by an emetic of 25 grains zinc. sulph. Her faeces were blackish-coloured, but on being placed in a dark room, there was no phosphorescence visible. There have been no symptoms of a serious nature since, and I believe the girl will make a good recovery. The treatment here consisted in the administration of magnesia, lime water, and saline aperients.

Dr. PHILIPSON : A case of phosphorus poisoning was recently admitted under my care, in which the patient recovered. As Dr. Drummond has stated, we have had a large number of attempted suicides from match-head infusions lately. My case was that of a female, a married woman, and, as far as I could gather, she was in a state of extreme collapse on admission. When I saw her the morning after her admission, I was struck by the impression of distress on the system. The pulse was quickened and compressible, the expression was anxious, and there was considerable epigastric pain. In the faeces, which were dark-coloured, there was no blood, and there was no blood in the vomit. She was put upon milk and potass water. Every care was taken of the patient, and for the first day or two she gradually improved. Then there was a sudden rise of temperature, and I ordered ice, by the mouth, and she was kept on this for twenty-four hours, when the symptoms subsided, and she thereafter made a good recovery.

Dr. OLIVER : Was there any albumen in the urine in Dr. Philipson's case? In a case of mine there was slight albumen on the eighth day, but there never was any luminosity on the surface of the body, in the vomited matter, nor in the faeces.

Dr. ANDERSON : In Airdrie, in Scotland, thirteen or fourteen years ago, I remember of a case where a nurse poisoned three or four of a family of children with rat paste. I happened to be called in to one of these cases, the last one, which like the others

proved fatal. A *post mortem* was allowed, and was made by the late Dr. Torrance and myself. The old doctor ordered the room to be darkened before the cavities of the body were opened. The stomach was ligatured at both ends and, along with its contents, was forwarded to the criminal authorities; but though we had no opportunity of examining that important organ, I remember well that whenever we cut through the œsophagus a luminous patch was at once visible.

Dr. GIBSON: There was one point which struck me in Dr. Philipson's case, which I would like to have explained. Dr. Philipson stated that his patient got nothing but milk and potass water. Now oil is the most perfect solvent we have for phosphorus, and as the oleaginous part of the milk would also be a good solvent, I should think there would be great risk in giving a patient, the subject of phosphorus poisoning, such a diet.

Dr. PHILIPSON: I am glad that Dr. Gibson has given me an opportunity of explaining this matter. The patient vomited very freely after admission to the hospital, and the bowels had also been acted upon, and I think we were perfectly justified in giving the milk as a nourishment when there was good reason to believe that none of the poison remained in the primæ viæ.

Mr. WALDY: There have been four cases of phosphorus poisoning treated within a recent period in this Infirmary. Two of these you have already heard about. In the third case the patient made an infusion of the heads of three boxes of matches and swallowed the whole of it. The fourth case was admitted two days ago. She had steeped two boxes of matches and drank the infusion. On admission she was in a state of complete collapse, and stimulants were freely used, and she bids well to make a good recovery, as does also the previous patient. In none of the cases was there any trace of albumen in the urine, nor was there any phosphorus detected on the faeces or vomit.

SLOW COMPRESSION OF THE CORD: CERVICAL PACHYMEINGITIS.

Dr. DRUMMOND further showed a specimen of pachymeningitis of the cervical region of the spinal cord, with the compressed cervical enlargement, and the vertebræ, from a case of Potts' disease. The patient, a young man, aged 25, a cooper, was admitted into the Infirmary for paralysis of both upper and lower extremities and rigidity of the cervical spine. He had suffered from syphilis in 1882 (three years before his death), and in addition, there was a family history of phthisis. About two years ago an abscess formed on the left side of his neck, and soon abscesses appeared on the right side also. Upwards of eighteen months ago, pains of a shoot-

ing character were felt in the back of the head and neck and down the arms. The muscles of the back of the neck became stiff, and cervico-cranial movements painful. About six months ago—just after the last abscess was opened—he observed numbness and weakness of the right arm and leg. Before long the left limbs were affected, and rigidity with spasms (knee clonus) occurred. He was treated by Dr. Robert Hardie, of the Gateshead Dispensary, and marked improvement took place, which, however, was only temporary, for he soon relapsed. On admission, the arms and legs were found to be rigid (extension-contracture), and almost completely paralysed. Sensibility was profoundly affected. The knee and ankle-jerk phenomena were very pronounced, and the condition known as *spinal epilepsy* was very frequently induced. The skin reflexes were absent. There was constipation, and a tendency to retention of urine. There were no bed sores. The temperature varied between 99° and 101°; the pulse was slow (60–70) and slightly irregular. For a time the patient's condition improved, and a comparatively favourable view of the case was entertained. But a sudden change for the worse set in (evidently the result of an effort to sit up): the limbs became completely paralysed, the temperature rose to 107°, the pulse to 120, respiration was carried on entirely by the diaphragm, and consciousness was lost, whilst efforts at articulation were perfectly futile. With this sudden change, the rigid legs became flaccid, but the knee-jerk remained, though diminished in intensity. Death supervened in a few hours.

At the *post mortem* the bodies of the upper cervical vertebrae were found diseased, and a thick deposit was observed on the anterior surface of the dura mater (external pachymeningitis), reaching from the fifth to the second vertebra. This compressed and flattened the cervical enlargement. As the brain was being removed, it was noted that the odontoid process of the axis had become separated from the portion of the atlas which is applied to it, and was pressing firmly into, or against, the medulla, for the latter was not torn. It was also obvious that the displacement of the odontoid process was the result of laceration of the transverse ligament.

The case was instructive in many ways, and revealed how readily a fatal accident may arise in cases of Potts' disease affecting the spinal column in the upper cervical region. There was one point worth special notice. He (the speaker) referred to the rapid disappearance of the rigidity of the muscles of the extremities when the medulla became compressed. A question that had long occupied the attention of pathologists was, what was the cause of the muscular rigidity in cases of slow compression of the cord, or other conditions which are wont to induce lateral

sclerosis? Two theories had been advanced to explain the phenomenon—first, that it was due to increased reflex, from loss of the cerebral inhibiting impulses; and second, that it resulted from irritation of the motor fibres of the pyramidal tracts. In his (Dr. Drummond's) opinion the first theory was untenable; and he was bound to say that he had for long thought it altogether insufficient to explain the condition. On the other hand, he would suggest that the case he had related went in favour of the latter view; and the sudden diminution of the tonicity arose from the fact that the compression by the displaced bony process rendered the motor fibres physiologically inactive, and thus no longer susceptible to the existing source of irritation.

CEREBRAL EMBOLISM.

Dr. ARNISON: This brain which I show was removed, *post mortem*, from a young woman, an employée at the post-office here, to which institution I am medical officer. About three years ago she had an attack of pleuro-pneumonia, from which she made a good recovery. She returned to her employment, but in March of this year had an attack of right hemiplegia. On examining her after this attack, I found a rasping murmur over the aortic valves. She recovered and resumed work, but in July she had a second attack of right hemiplegia, and when the effects of this had in some measure passed off she was sent to the country, where she did well for some time, but recently had a third attack and died last Thursday. I have shown the specimen to Dr. Drummond, who will perhaps give us his opinion upon the condition.

Dr. DRUMMOND remarked that it was evidently a case of softening of the brain from embolism of the left middle cerebral artery. In that vessel there is a clot. We have a history of three successive embolic attacks, but I do not think that these attacks were attributable to three separate emboli being carried into the vessel. Judging from the appearances, I should rather say that what occurred here was this: The first plug completely occluded the artery, and a thrombus formed behind it, and this thrombus gradually extended backwards, involving successively branches of the artery, each of which, as its blood supply was cut off, would occasion the second and third attack.

Dr. POWELL: Dr. Drummond's explanation of the course of events here is a very ingenious one. I had a very similar case under my care, and I attributed the phenomena in that case to separate embolic attacks, but I should be disposed to believe that in my case the same thing had happened which apparently has happened here.

Dr. OLIVER : What was the appearance of the heart in this case, and how is the rapid development of the murmur to be accounted for ?

Dr. ARNISON : I cannot explain the rapid development of the murmur. I have to examine every candidate for admission into the post-office service, and this girl would pass through my hands in the usual course. I don't think I could have overlooked a cardiac murmur had it existed in her case, and if present I must have rejected her. I was not allowed a complete *post mortem*, so that I cannot say what the condition of the heart was.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

SESSION 1885-86.

JANUARY MEETING.

THE FOURTH MONTHLY MEETING of the Society was held in the Library of the Newcastle-on-Tyne Infirmary, on the evening of Thursday, January 14th—Dr. Fielden (President) in the chair.

NEW MEMBERS ELECTED.

The following gentlemen were unanimously elected members of the Society:—

Samuel McBean, L.R.C.P. Edin., Newcastle.

David W. Inglis, M.D. Glasg., Jarrow-on-Tyne.

NEW MEMBERS PROPOSED.

The following gentlemen were proposed for election:—

Thos. Wood, M.B., C.M., Houghton-le-Spring.

Fred. Chas. Mears, M.B., C.M. Durh., North Shields.

Chas. Blair, M.B. Durh., M.R.C.S.

ANEURISM OF THE RIGHT SUBCLAVIAN ARTERY (?).

Mr. PAGE: The case I am about to show you, sir, is one of very great interest and rarity. The patient, a domestic servant, aged 24 years, is a somewhat delicate, but not unhealthy-looking young woman. For the last six months she has been aware of a swelling situated above the centre of the right clavicle. She complains of pain and numbness down the right arm, and of some swelling of the hand and forearm, which is more noticeable towards night. She says also that the right hand sweats much more freely than the left. Upon examination in the erect position, the centre of the right supra clavicular hollow is seen to be occupied by a pulsating tumour. There is no history of any injury; no appreciable difference between the right and left radial pulses; no variation in the size of the pupils. The swelling feels firm, about the size of a pigeon's egg, is fixed, and evidently emerges from behind the anterior scalenus. The case came to me as an aneurism

of the subclavian, and little as one would expect to find an aneurism in such a patient in such a position, I must confess that when I examined the young woman in my consulting room, I failed to satisfy myself that there was no aneurism. Two days after, however, examining the case again more carefully, in the horizontal position, a bony growth could be felt projecting, most probably from the transverse process of a cervical vertebra, over which, in the erect position, the subclavian artery courses, giving rise to a tumour resembling an aneurism of the second part of the subclavian. How long this exostosis has existed, and whether it is increasing in size, I cannot tell. I think no surgical treatment should be adopted in the present condition of things; but upon this point I should be glad of some expression of opinion. The case reminds me of a celebrated one, which I dare say some gentlemen in this room have heard the late Sir Jas. Simpson relate to the credit of his colleague, Mr. Syme. A man from the north of Scotland made his way south to Edinburgh; and as he passed through Inverness, Aberdeen, and Glasgow, consulted eminent surgeons about the nature and treatment of a pulsating tumour in the neck. All agreed the case was one of aneurism of the common carotid; but Mr. Syme, then quite a young surgeon, demonstrated the existence of an exostosis lying behind the common carotid, to which the signs of aneurism were due. My colleague Dr. Arnison deserves, in this instance, the credit which Simpson gave to Syme, for it is to him that I am mainly indebted for clearing up the diagnosis of this exceedingly interesting and instructive case. Dr. Philipson has also kindly examined the patient, and agrees with us that there is no aneurism present.

Dr. PHILIPSON: I had an opportunity of examining this patient, and came to the conclusion that this was not a case of aneurism. The sex of the patient and her age are against the theory of aneurism. I think that without a history of syphilis, which there is not here, it is very rare to meet with aneurism in the female, especially at this age.

Dr. HUME: In examining this patient in bed, my attention was attracted to one point, which I don't know whether any of my colleagues noticed. When the patient was sitting up the radial pulse on the affected side was stopped, and this peculiarity could be observed any number of times by simply making the girl lie down when the pulse was felt at the wrist, and then making her sit up, when it at once disappeared. This phenomenon, in my opinion, went strongly against the diagnosis of aneurism.

Dr. GIBSON: Would that not point to the growth springing from the front—that is from the posterior aspect of the rib—rather than from the vertrebræ behind?

Dr. PEART: The gentleman who sent in this case informs me that the patient had at one time bloody expectoration; does that still continue?

Dr. MURPHY: I quite agree that this is not a case of aneurism, and in support of that opinion I would call attention to the fact which some of you may not have noticed, that the vessel can be slipped off the growth. Might this growth not be malignant?

Mr. PAGE: I believe the growth to be a simple exostosis growing from one of the transverse processes of the vertebræ, but it is rather peculiar that no complaint should have been made of the condition till six months ago. The physicians have examined the lungs, and have, I believe, found some slight indications of disease there, but since the girl has been under my observation she has had no spitting of blood.

LOOSE CARTILAGE FROM THE JOINT.

Mr. PAGE: This very remarkable specimen of a loose cartilage was removed from the left knee-joint of a woman, aged 80 years, early last month. It measured nearly two inches in length, $1\frac{1}{4}$ inches in breadth, and three-quarters of an inch in thickness. It weighs 250 grains, and in appearance is not very unlike a peeled French walnut. The central portion has undergone calcareous degeneration, and the surface consists of cartilage. The patient for the last six years has suffered from pain and from swelling of the joint, and has been aware of a moveable body in the joint—moveable from side to side of the upper part of the joint. Last November she fell and struck her left knee violently against the kerb. On rising the joint was flexed, and could not be extended. On admission the joint was distended with fluid, and the loose body could be easily felt. Under rest and soothing applications the fluid disappeared, and then the joint was freely incised, and the specimen removed. The wound healed by first intention. The age of the patient, and the peculiar appearance and large size of the loose cartilage, are the chief features of interest in the case.

Dr. MORGAN: I show here two loose cartilages, which I removed from the knee-joint of a male patient. The smaller one sometimes gave a little trouble. I removed the bodies under antiseptic treatment, but I have removed several without the use of the spray at all, though these were not so large as the specimens shown.

Mr. DODD: I remembered several cases of removal of loose bodies from the knee-joint, performed by the late Sir John Fife and other surgeons of this Infirmary, many years ago. The joints in these cases were opened without any antiseptic precautions, and all did well.

(a) UTERINE MYOMA ; (b) LEUCOCYTHEMIA ; (c) ACUTE ULCERATION OF COLON.

Dr. LIMONT : This first specimen which I show was removed from a patient 34 years of age. On admission she complained of enlargement at lower part of abdomen. Her menstrual history was pretty regular, but very profuse. Her trouble first commenced six years ago, and from time to time since then she has been under treatment, sometimes deriving a little benefit. The swelling was first noticed three or four months ago, and on admission the softness of the tumour, and its rapid growth, raised the question of pregnancy. Per vaginam, the ovaries could be felt on each side, the right one being tender to the touch. The fact that there was milk in the breast was another argument in favour of pregnancy. While waiting for an opportunity to clear up the diagnosis, she had a very profuse haemorrhage. The haemorrhage could only be stopped by dilatation, and afterwards I further dilated the cervix to explore the condition of the womb. Shortly afterwards, however, the patient had a rigor, developed peritonitis, and died. *Post mortem* was found this immense interstitial myoma, which you will see involves nearly the whole of the anterior uterine wall.

This second specimen is a spleen, which I removed from a woman 46 years of age, who died of leucocythemia. She came to the Infirmary, complaining of swelling of the abdomen and weakness of the legs, and stated that she had been in bad health for two years. She believed her illness was first brought on by long-continued domestic troubles. There were marked heart murmurs, and the woman was very emaciated and anaemic, and suffered from haemorrhages from different mucous membranes. The physical signs of enlarged spleen (including the presence of the notch) were very clearly made out, as were also enlarged glands in axilla and groin. The swelling of the abdomen was partly due to the accumulation of fluid in the peritoneal cavity. Treatment did not improve the patients' condition, the dropsy invading the pleural cavities and the legs, and ultimately she died. This enormously-enlarged spleen was found at the *post mortem*, and also slight enlargement of all lymphatic glands.

The third specimen, which I have here, is a portion of colon, removed *post mortem* from a boy recently under my care. The lad had not been feeling well and took a large dose of castor oil. That same night he took a shivering, and was purged, and was very ill the next day. The purging continued for a day or two, and when I saw him there was nothing in the facial expression to indicate that the lad was very ill, but the sphincters were relaxed. There were no spots on the body to indicate typhoid or other fever. The boy could not be nursed at home, so he was removed to the

Infirmary, where he died the same night. At the *post mortem*, all the organs were healthy, and nothing was found to account for the sudden termination of the case but this large track of acute inflammation of the colon, extending from the cœcum to the rectum. The walls are much thickened and injected, and are at parts ulcerated.

Dr. GOWANS: I should like to ask if Dr. Limont observed any change in the bone marrow, or whether the bone was diseased or not in his case of leucocythemia?

Dr. OLIVER: In a case which I saw with Dr. Gibson, about five years ago, we dilated the cervix in a case where there had been great haemorrhage, with a result similar to what befell Dr. Limont. Our patient died in a few days from peritonitis.

Dr. MURPHY: Sponge tents are unsatisfactory dilators, no matter how clean you keep them. Sea-tangle tents are better, especially when used as Dr. Atthill recommends, namely, inserting several of them, one after the other, until you have a faggot occupying the cervix. I have lately been using tents made of a very light and very absorbent American wood, from which I have got good results.

Dr. MORRIS: Is it specially in the case of uterine myoma that there seems to be such danger in dilating? I think it is a very good plan to put a pad of cotton wool and glycerine against the cervix, as recommended by Dr. Marina Sims. After dilating for retained placenta, I have never had any trouble. There are two kinds of sea-tangle tent. The solid I consider dangerous, from not allowing the escape of the uterine secretions, and I always now use the hollow ones.

Dr. GIBSON: The effect of dilation is a purely mechanical one. There is pressure on the cervix and pressure on the body of the uterus, and though I have used thousands of tents, I know of no difference between the hollow and the solid.

Dr. GOWANS: Am I to understand that Dr. Gibson does not believe there may be danger from damming back the uterine secretions?

Dr. GIBSON: I never said so.

Dr. LIMONT: In my case of leucocythemia, there was no change in the appearance of the red blood corpuscles; but the white corpuscles were very much increased in number. I am sorry we did not examine the bones or marrow.

In regard to the case of uterine myoma, dilatation was produced by a bunch of tangle tents and with anticeptic precautions. I think in all these cases of dilation, the bad results arise from

septicæmia. In this case, I look upon the result as caused by septicæmia, as the patient developed pleurisy; and I found afterwards that the cervix was torn at one side, and that rent was, I believe, the seat of the septic absorption. Fearing septicæmia I put off dilatation until forced to it by haemorrhage, which could not be stopped by other means.

CARCINOMA OF STOMACH AND OESOPHAGUS.

Dr. PHILIPSON: These specimens were removed from a very interesting case of cancer of the lower end of the oesophagus and cardiac end of the stomach. The members of the Society will remember that at our last meeting those present were invited to see Dr. Arnison perform the second stage of gastrostomy on the patient, the first stage having been completed on the previous Sunday. The patient, a veterinary surgeon, aged 54 years, was admitted on November 12, and for six weeks previous to that had complained of great difficulty in swallowing. He was, as I have said, a veterinary surgeon, and came here in hopes, I believe, that some operation might be able to afford him some relief. After he had been here a few days, I thought it right to get Mr. Waldy, the house physician, to pass a bougie after I had carefully excluded the possibility of aneurism from the diagnosis. An obstruction was met with sixteen inches from the mouth, and through this even the smallest oesophageal bougie we had would not pass. From his cachectic look, from his emaciation, from the whole of the general appearances, and from the fact that no corrosive substance had been swallowed, I came to the conclusion that we had here to deal with a malignant growth. I put him upon bromide of ammonium, because of previous experiences I had had of the wonderfully sedative properties that drug possesses over irritations in the respiratory and gastric tracts. He was fed per rectum, with nutrient enemata, containing a considerable quantity of stimulants. For a short time his condition improved, a fact which I attribute to the benefit derived from the enemata: but about the beginning of December he began to fail, and then Dr. Arnison was consulted in regard to the expediency of performing gastrostomy. On December 6th the first stage of the operation was performed, and on the 10th the operation was completed. For a day or two after this all went well, till December 13th, when there was a vomiting of blood. This recurred on the 14th and again on the 27th, and was restrained each time by subcutaneous injections of ergotine, and the general condition was much soothed by small pieces of ice placed in the mouth and allowed to dissolve. From the attack of the 27th December my patient never completely rallied, and he died on the 2nd of January. The foulness of the breath after the operation was a most objectionable feature, but was corrected by the use of eucalyptus and

terebene, and sometimes a little ice. This was all he took by the mouth after the operation. For about three weeks after admission the temperature was about the normal. Then on December 2nd there was a sudden fall, almost to collapse. From this he rallied after a large injection of brandy per rectum. After this we were doubtful about the propriety of operating, but as no relapse took place, and as the patient himself was most urgent to have what chance an operation would give him, I came to the conclusion that we were justified, and nothing unfortunate occurred. I show you here the temperature charts, from which you will see how unequal it was. After the operation, there are three considerable rises, with gradual return again to about the normal ; for the last time the temperature began to rise on December 29th, and on the 31st there is a very sudden fall, indicating the fatal termination which took place on the 2nd of January.

On examining the stomach and œsophagus, which my colleague, Dr. Drummond, removed after death, we found complete constriction of the lower third of the œsophagus, with some malignant growth in the cardiac end of the stomach. The opening that was made into the stomach at the operation was near the pyloric end. In the œsophagus, above the stricture, there is a considerable dilatation. I would ask your attention to the seat of this growth, as in my experience malignant disease is generally confined to the first third of the œsophagus, and the question arises, did this growth begin in the œsophagus and spread to the cardiac end of stomach, or did it begin in the stomach and invade afterwards the œsophagus ?

Dr. DRUMMOND : With reference to the origin of the disease in this case, I was of opinion at the *post mortem* that it had begun in the cardiac end of the stomach, from the fact that there was a deep-seated hard lump of malignant matter in the submucous tissue of the stomach. There was, I believe, some regurgitation of food after the operation, through the opening made into the stomach, and perhaps Dr. Philipson will tell us whether this was accompanied by any feeling of nausea.

Dr. MORGAN : It has often appeared to me remarkable how far this disease may have extended before the victim of it considers himself an invalid at all. I remember one day in the refreshment room at Carlisle Station, of a big strong-looking gentleman coming in and ordering some refreshments. In attempting to swallow a glass of beer he vomited the whole of it back at once. I soon afterwards, curiously enough, had an opportunity of seeing this same gentleman, and found him suffering from an almost complete stricture of the œsophagus. There was, I remember, great foulness of breath in his case, and he died not long after of starvation,

and yet he was in the hunting field apparently in his usual health within a month of his death. I can recall also another case very similar to the last, and one fails to understand how these people can go on from day to day swallowing solid food without apparently any inconvenience. With regard to the haematemesis, in this case I have found hamamelis a very reliable remedy in bleeding from the stomach, and one well worth a trial.

Dr. HUME: This case has raised in my mind the difficulty in diagnosis. I have in my mind a case in which the conditions were exactly the opposite of those in Dr. Morgan's. I have had for some time under my care a gentleman who now, I am convinced, has malignant stricture. He has complained more or less for the last two years, though generally his health has been pretty good. He can swallow the most of a solid meal, when spasm will ensue and put a stop to it for that time. These attacks vary in their frequency, and sometimes he will go as long as a month without any of them. This condition of matters went on till the middle of last summer, when he had consulted several medical men, and bougies had been passed, and the patient was told that he had no stricture. Now there certainly is stricture, but a certain amount of it is undoubtedly due to spasm. The spasm generally comes on after a meal, and may not be relieved until he has regurgitated a mouthful or two of what he has just eaten. Sir Wm. Jenner saw the case with me, and completely concurs in the diagnosis of malignant stricture. I asked Sir William if he would want to pass a bougie, and he replied "No; in these cases I don't believe that anything is to be gained by it." At first I believe the case was one of reflex spasm, the disease being then in the cardiac end of the stomach—that is the only theory on which I can explain the phenomena of the case. With regard to treatment, Dr. Philipson's case raises the question on the desirability of gastrostomy in malignant stricture. I don't think myself that the operation does any good to the patient, and it is an operation which I believe will in time be abandoned.

Dr. PHILIPSON: I should quite agree with Dr. Drummond that the course of events may have been just as he thinks. There was no symptom of nausea at the time my patient regurgitated his food. It seemed to me to be quite involuntary, and more an oozing out of the opening than an actual rejection by the stomach. A case was sent to me the other day for opinion. The patient was seized with a sudden stoppage in his swallowing while at dinner on Christmas day. In this case, the surgeon in charge had passed a bougie after the occurrence, and met obstruction 16 inches from the mouth. Dr. Morgan suggested the use of hamamelis, but though I have a high opinion of that preparation, a hypodermic

remedy recommended itself more to me under the circumstances. We were almost forced to the operation in this case by the patient himself. He was a most intelligent man, and knew the risks, and I think that under such circumstances we were quite justified. I quite agree with Sir Wm. Jenner and Dr. Hume, that not much information is to be derived by the passing of a bougie.

CASE OF UTERINE MYOMA.

Dr. HUME: The patient from whom I removed these specimens was handed over to me by Dr. Oliver. There was nothing very particular about the ovaries except that they are very small, while the tubes are very large and distinct. The patient was a woman, aged 39, and the uterine tumour had been growing for some months. She applied first to her attendant for retention of urine, occurring at each of her menstrual periods for some months. At the time of her admission here, the tumour occupied the whole of the pelvis, and any increase in the size of it, such as would occur at each menstrual period, would cause it to press upon the neck of the bladder. Her menstrual periods were regular and profuse. The tumour reached midway from the pubes to the umbilicus, and it had rotated, bringing with it the left ovary to the front. The right ovary we found was adherent to the uterus. The left ovary had a good pedicle, and, by carefully rotating the uterus, we were able to ligature the right ovary and remove it also. The patient has done very well since the operation, and the tumour at last examination was, I think, diminished in size.

Dr. DRUMMOND: A patient from whom Dr. Arnison removed the uterine appendages for myoma of the uterus four years ago, came to see me the other day, and the tumour had almost altogether disappeared. The only thing she complained of was a tendency to hernia at the site of the abdominal incision.

Dr. GOWANS: Has Dr. Hume's patient menstruated since the operation. Lawson Tait quotes a case where among other things only a small part of an ovary was left, and patient was not relieved at all. Dr. Murphy also had a case, I believe, where after removal of the ovaries the woman not only menstruated but became pregnant and bore a child.

Dr. HUME: Uterine haemorrhage came on immediately after the operation in my case, as it often does, and continued for a few days, but there has been no menstrual flow since. So far as I remember, the cases quoted by Lawson Tait were imperfect in other respects than in that there was a portion of ovary left.

Dr. MURPHY: Battey, when he removed the ovaries, did not remove the tubes. To remove the tubes and ovaries together is a

separate operation introduced by Lawson Tait. In the case Dr. Gowans refers to, I removed one ovary for cystic disease, punctured several small cysts on the remaining one, and put a double ligature round it, and left it. The woman certainly became pregnant afterwards.

LARGE NÆVUS OF THE ARM.

Dr. HUME: The patient from whom I removed this growth was sent to me with a tumour arising from a little above the elbow joint, and extending downward to midway between the elbow and the wrist. I thought the case was one of nævus, with a fatty base. The growth sprang from the deep intermuscular septa, and as it ramified among the muscles, it was very difficult to remove without injury to the muscles. After a considerable amount of trouble, however, I got away the whole of the growth. Without Esmarch's bandage this operation would have been impossible, but with the complete stoppage of the circulation of the limb secured by it, the whole operation was well nigh bloodless.

RENAL CALCULI.

Dr. MURPHY: The specimens which I have here were removed, *post mortem*, from a patient who came under my care about a year ago, with a compound comminuted fracture of the femur. The lad was treated antiseptically, and from time to time sequestra came away. Within two months, while under treatment, he passed 10 or 12 renal calculi. Then the right kidney became the seat of pain, and the symptoms were again all those of renal calculi. The lad got about for some time, and was apparently doing well, when suddenly pus appeared in the urine, and he rapidly sank and died. *Post mortem* the kidneys were found enlarged, and the pelvis of the right one was distended with pus, in which were embedded a number of small calculi. As being of interest in connection with this case, I show also some other calculi. This large one was from a case of fracture of the femur, and the stone was removed from the bladder. This other one was from a woman who was also the subject of a fracture of the femur.

NOTES ON (a) A FATAL CASE OF PERFORATING ULCER
OF THE SMALL INTESTINE; (b) A FATAL CASE OF
OBSTRUCTION OF THE BOWEL, FOR GALL-STONE.

By WALTER MORRIS, M.B., C.M., Chester-le-Street.

CASE (a).—Robert Taylor, married, 24 years of age, died 8th May, 1885. Occupation, up to within three months of death, a collier, then a shopman (lifting heavy weights); the last day of his active life an insurance agent, *i.e.*, on 5th May.

Previous History:—Had had good health all his life, except that he complained at irregular periods, especially on coming home from work, of an indefinite soreness in the region of navel. This pain was not constant; usually lasted for a short time; the mother states about fifteen minutes. Was never influenced by food; a few drops of Friar's balsam, or a cup of hot tea, would relieve it. Never was known to vomit after food. Was a temperate, steady man.

History of Attack:—Left his home on the morning of May 5th, to do his first day's canvassing as an insurance agent. After walking about 14 miles, was seized with a violent pain in the region of the navel. As far as can be ascertained did not vomit. Struggled on for another two miles, asked to be admitted into a strange house by the way-side, and fell on the floor when the door was opened. This was about six p.m. on May 5th. He was attended by an unqualified practitioner until May 7th, when I was asked to see him. I am told that during that time there had been considerable vomiting of coloured fluid, yellow, green, &c., but not faecal nor bloody, and that the bowels had not been moved, although enemata had been administered. I saw the case first at 11 a.m. on May 7th, and found the man lying in bed, with pale and pinched face, sub-normal temperature, distended abdomen, which was, however, all but painless on considerable pressure. Percussion gave a tympanitic sound all over abdomen, except at a point below and to the left side of umbilicus, where there was dulness over an area of about four inches, and a certain amount of resistance. Per rectum, nothing could be felt. The bladder acted but seldom, and then only in small quantities. The pulse was 97, and small.

Judging the case on its merits, and influenced perhaps by a previous case, where the diagnosis had been confirmed both before and after death, I concluded that I had to deal with acute volvulus high up in the intestine.

I saw the man several times during the next twenty-four hours. The patient himself, as well as his friends, were most anxious that I should perform an abdominal section for the purpose of releasing

the supposed stricture. Each visit, however, only confirmed me in my opinion that the man was rapidly sinking, and somewhat loth I decided not to operate. There was no vomiting after my first visit. The patient died on 8th May, about 5 p.m., about 72 hours after his seizure.

Post mortem, on Sunday, May 10th :—The abdominal cavity, on being opened, showed all the appearance of recent severe peritonitis, and contained a large amount of brown-coloured fluid—the dull space mentioned above being due to a mass of lymph. The intestine was healthy throughout, except at one spot—the first part of the duodenum, where the parts were so matted together as to be quite inseparable by peritoneal adhesions, which were evidently of old standing. At the first part of the duodenum, and at its posterior part, immediately adjacent to the pyloric orifice of the stomach, was a ragged ulcerated space the size of a florin, and at this spot perforation had taken place through a small orifice.

The salient points of the case then were these—no special antecedent history; a long and exhausting and unaccustomed walk, a sudden seizure of pain in region of navel, accompanied with vomiting of a fairly urgent nature and absolute constipation; distention of abdomen almost painless, scanty urine, rapid collapse and death in 72 hours. It is easy to be wise after the event, and many cases are on record, one in the B.M. Journal only three weeks since, where the abdomen has been opened and a condition somewhat similar to the above found, but I think that if I had given greater attention to the rapidity with which death was coming on, I would have nearly approached a correct diagnosis.

So far as my limited experience goes, the rapidity with which death comes on is an important point in the differentiating diagnosis between intestinal obstruction, properly so-called, and obstruction, the result of peritonitis, caused by the perforation of some hollow viscus. In perforation, as might be expected, the fatal issue is much more rapid.

In this case, the scanty and infrequent micturition was so marked, that to my mind that symptom as one of obstruction of the bowel is valueless.

I confess that even after the case has been cleared up, *post mortem*, it still remains in one sense puzzling. That a condition such as described should exist without definite pain-symptoms at a certain period after food is astonishing—why a cup of hot tea should relieve the pain when it was left at irregular periods!

This, however, is clear, that severe local abdominal pain, even though lasting for but a short time, should direct one's mind to the possibility of some local ulcerative condition, causing local peritonitis; and where one had to deal with that rare being,

an intelligent patient, a course of treatment might be adopted, including abstention from severe muscular exertion, which might result, without the knowledge of doctor or patient, in saving a valuable life.

FATAL OBSTRUCTION OF SMALL INTESTINE BY GALL-STONE.

CASE (b).—Susannah Minto, widow, æt 56 years, a well-nourished, but not gross woman.

Previous history, so far as it bears on the case:—Has on several previous occasions suffered from what she calls “spasms,” with pain and vomiting. The last attack before this was three months since, when she was confined to bed for three weeks, with what she was told was “inflammation of the bowels.”

History of the Attack:—On September the 21st, she walked some nine or ten miles, and had a railway journey of about three-quarters of an hour. Next day she complained of intense pain in region of umbilicus and above it, which she says she thought one of her old attacks of spasms. This pain was accompanied by vomiting of a yellow colour and bitter taste. The vomiting increased in severity rapidly, and became stercoaceous. This continued until September 28th, when the vomiting ceased. There was, however, continual and violent eructation, and there was also hiccuph.

She was never at any time jaundiced, although of a sallow complexion.

I first saw the case on October 1st, 1885, about mid-day. The patient was lying in bed drowsy, but could easily be roused to answer questions, although the effort seemed to exhaust her. The temperature was sub-normal, and the pulse so feeble and intermittent that it could not be counted. The surface and extremities were quite cold. She complained of no pain. The abdomen was normal in appearance, there being no distension or dulness; in fact nothing abnormal in the outward appearance, but the general prostration was extreme—indeed, I did not think she could live many hours. There was no jaundice; the lower bowel was empty. The diagnosis which I arrived at was strangulation of the intestine by band, and I concluded that the strangulated part had sloughed; but this was quite provisional, and in the woman’s condition I considered operation unjustifiable. I ordered her half-a-teaspoonful of brandy in two teaspoonsful of milk every half-an-hour, and gave a mixture of ammonia and bark. At my visit next morning early, I found the temperature normal, the pulse obvious and ninety in number; there had been no more vomiting, and the patient had passed flatus per anum, which was described as being most offensive. Indeed, while I was present, the very offensive nature of the flatus was made evident to me.

At my visit on the next day (October 3rd), matters had again changed for the worse. The patient had had a most restless night with pain; there had been, for the first time for nine days, sterco-raceous vomiting; yet, with all, flatus still passed in the ordinary channel. The temperature was still normal, and the pulse fairly good.

Under these circumstances I determined to explore the abdomen and returned to the woman's house, which was two-and-a-half miles distant, in the evening with Mr. Page, who was on that day seeing another case with me at Chester-le-Street, and who very kindly consented to give me his opinion on this case.

We found that since my visit at midday there had been more faecal vomiting, but flatus still passed per anum.

The decision arrived at by Mr. Page, myself, and two other medical men present was that if operation was attempted the woman would die on the table, and we decided that under the circumstances it would be well that she should not do so.

Death took place fourteen hours later, on October 4th.

Post mortem examination:—On October 5th, at 8·30 a.m., I made an incision three inches long between umbilicus and pubes, and passed my hand into abdominal cavity. Examining first the pelvis and coecal regions, and finding nothing, I then passed my hand up towards the liver, and in doing so came against a hard substance, which on being drawn down to the incision proved to be the gall-stone, which I now show you. The stone was lying with its long axis in the longitudinal axis of the intestine, about thirty inches from the pyloric orifice of the stomach; the intestine was clinging around the stone, and both above and, so far as I traced it, below the stone was empty of faecal matter. There was certainly no other stone present; the gall-bladder was empty. You will observe that the stone is faceted at both ends.

That fatal obstruction from gall-stone is decidedly a rare condition is undoubtedly. In the late Dr. Fagge's recently issued "Principles and Practice of Medicine," I find that "six such cases are recorded in the pathological transactions;" but, says Dr. Fagge, "they must be of infrequent occurrence, for within the last twenty years I believe that not one has occurred at Guy's Hospital."

In the light which this case has given me, I am satisfied that I have previously seen two cases of intestinal obstruction from gall-stone which did not terminate fatally, but where the obstruction suddenly ceased about fourteen days after the onset, and where the dejecta were thrown away before being seen by me. Both cases occurred in middle-aged women.

The points of interest obvious to every one are—first, the urgent symptoms of complete intestinal obstruction on the one hand, viz.,

the total absence of the passage of faecal matter per anum and the presence of stercoraceous vomiting; and second, the continued passing of flatus per anum, and the absence of any abdominal distension or peritonitis whatever.

The reasons for these contrary conditions are so obvious that I need not specially mention them. I think, sir, that if it had been my good fortune to have seen the case at an earlier period, I might possibly have been able to present to the Society the patient, as well as the stone; but at any rate I hope the case has been so full of instruction to me that in any future case of acute obstruction in the lumen of the intestine, I shall be able to form a more accurate absolute diagnosis, even at the eleventh hour, and to merge the physician into the surgeon.

I have ventured, sir, to bring these two cases before the Society from the knowledge that any clinical observations, however imperfect, of cases such as I have described (especially when they are supplemented by a *post mortem* examination, placing the cause of death beyond doubt) cannot but be an aid in the diagnosis and treatment of the obscure abdominal conditions with which we are so often confronted.

The first case must necessarily, from its very nature, have been fatal, whatever may have been done; but the second case was so clearly one for an operation (which, as the sequel showed, might have been most expeditiously accomplished) that the non-recognition of the case seems to have been distinctly a life thrown away. Quoting once more from Dr. Fagge's work: "Impaction of a gall-stone in the small intestine is to be distinguished, if at all, by the fact that it occurs chiefly in fat, elderly women. Among the numerous causes of internal strangulation, it seems to me that no diagnosis can as yet be attempted."

I think, however, sir, that if I had a case where obstruction was preceded by severe pain of a certain characteristic nature, if this attack were not followed by peritonitis, more especially if flatus were passed per anum, I should undertake an exploratory operation with some degree of confidence as to the result.

Dr. HUME: I remember of a case of impacted gall-stone operated upon by Keith, and the patient did well.

Mr. PAGE: I know of two cases in this hospital in which two girls were brought in with simple indigestive symptoms, and both died very suddenly. In regard to the second case, it seems to me almost inexplicable that a stone of this size, which was capable of passing through the common bile duct, should become impacted, the small intestine producing complete obstruction.

Dr. OLIVER: I don't know that the stone does always pass

through the common duct. I think there are cases where it ulcerates through the gall-bladder into the intestine.

Mr. PAGE: Can Dr. Oliver point to any one case where that occurred?

Dr. MORGAN: It is very often a valuable life that is lost from intestinal obstruction and perforation. You generally find that the victims of this are people more promising than usual. What I cannot understand in Dr. Morris' first case is the want of pain. In perforation, according to my experience, there is extreme pain. I had a case the other day which died, but I am sure from the symptoms that it was not a case of perforation, but of volvulus or obstruction.

Dr. PHILIPSON: The stone may have been for some time at the orifice of the common duct and had suddenly become dislodged into the intestine. I remember of a case where after death we found a stone of some size just at the orifice of the common bile duct.

Dr. ADAMSON: Dr. Morris' two cases show how important it is that country surgeons should oftener than they do make some efforts to obtain *post mortems*. The value to themselves and others from properly recorded cases, confirmed or otherwise by a careful *post mortem* examination, cannot be overestimated.

NOTES ON A CASE OF CALCULUS OF THE VERMIFORM APPENDIX.

BY JAMES DRUMMOND, M.D., South Shields.

The case which is the subject of the following notes is sufficiently interesting, I hope, to justify me in bringing it before you. There was great difficulty in coming to a correct diagnosis in the earlier stages of the disease; indeed, it is only in the light of subsequent events that one is enabled to account for the preceding symptoms. However, I will not trouble you with a recital of those difficulties at present, but confine myself to giving a record of the case.

Mrs. B., æt 64, married, is the mother of a large and healthy family. Her mother and sister died of cancer. The patient has had fairly good health all her life, has had normal confinements, and ceased to menstruate at 46.

Her first serious illness was in February, 1885, when I attended her. At this time she was seized with severe pain over the right iliac region. On examination, I found there was considerable hardness, and great tenderness on one spot. On enquiry, the patient told me she had felt a "lump" at the seat of pain for 24 years, but that it had never previously caused her any discomfort. From this point, pain and tenderness on pressure gradually extended all over the abdomen, ending in severe and undoubted peritonitis. There was nothing noteworthy in this attack, except perhaps, the fact that the inflammation had originated at a well-defined spot, subsequently involving the whole abdomen. The bowels acted normally, but vomiting was troublesome for a few days. For three weeks the temperature was never under 100°, and it was beyond my expectation that she recovered. The symptoms gradually abated, however, and after a tedious convalescence she regained her usual health. There was some trouble during convalescence, with the bowels, enemas having to be given for several weeks to obtain relief. This I satisfied myself was due to atony of the rectum and not to obstruction. In the right iliac fossa, where the inflammatory symptoms originated, there was still to be felt a round, hard swelling, slightly painful on pressure, easily moveable, about the size of a small orange. I examined the patient carefully on several occasions, without being able to come to a definite conclusion as to the nature of the tumour. I was pretty certain the liver was not affected in any way, as that was well defined, with a wide area giving a clear note on percussion lying between it and the swelling. Moreover, there never was the slightest pain in this region, or other symptom indicative of disturbance of this organ. There was no symptom of the gall-bladder being in any way affected. The evacuations continued

normal in colour, there was no jaundice, and there never was the slightest pain over the region of the liver or gall-bladder. I was also quite satisfied the tumour was not a displaced kidney. It might be either an enlarged ovary, or a tumour of some kind involving some of the tissues close to the caecum. However, as the patient gained her usual strength, and suffered no inconvenience in any way, and having become quite accustomed to the presence of the swelling, I did not feel called upon to interfere with it.

She continued in her usual health till the middle of October, when pain again seized her in the right iliac region. This time, however, the pain remained local, the swelling gradually increased in size, the skin became œdematosus and bound down to the tissues underneath. About four weeks after the onset of this attack, the tumour was about the size of a cocoa nut. During this time the pain was at no time very severe, and was relieved by means of anodynes applied locally on spongio piline. The temperature was never high, and all the symptoms were such as are present during the formation of an abscess. The skin over the enlargement became discoloured, and, eventually, I was able to detect fluctuation at the most prominent spot. Poultices were now applied, and four days later I made an incision into an abscess, from which escaped three or four ounces of fœtid, yellowish discharge. From this point the pain was very slight, and the swelling gradually diminished in size. On examining the wound, a probe entered about two inches without detecting any foreign body; but for obvious reasons great care had to be exercised when using a probe. No flatus or faeces passed through the wound. Once or twice a small bubble of air was pressed out, but this was attributed to decomposition of the discharge.

The discharge was not fœtid after the first day, and was sometimes of a bright orange colour, but more frequently pale and watery, with white flakes in it, about a tablespoonful being discharged in twenty-four hours. Ten days after opening the abscess, what was thought to be a slough appeared in the wound, but on taking hold of it with the dressing forceps I removed the largest of the calculi which you see. Next day three smaller stones were removed, and so on till the number reached thirteen. I sent the specimens to Dr. Oliver for examination, and as he subsequently saw the patient with me, I hope he will be willing to give us the benefit of his opinion on the case. At present the wound is still discharging a milky fluid, the patient is suffering little or no pain, and is able to sit up nearly all day. She takes her food well, her bowels act regularly without aperients, and she has gained flesh considerably within the last few weeks.

The wound is situated about one inch above and running parallel with Poupart's ligament, and about three inches internally

from the anterior superior iliac spine. Above, and continuous with the wound, there is still a lump about the size of a small orange, tender on pressure and slightly moveable. Whether there are still more calculi to be discharged, or whether the lump is due to induration of the tissues, it is difficult to say. Nature has done her work so well up to the present that I have hesitated to have recourse to operative measures. Taking the whole history into consideration, I think there is every reason for believing that the case is one of calculus of the vermiform appendix.

Mr. Treves, in his recent investigations on the anatomy of the intestinal canal, has shown that the conditions favourable to the formation of concretions in the appendix exist in many subjects. When we consider how frequently foreign bodies (such as plum-stones, orange pips, &c.) find their way into the appendix, it is easy to understand how the intestinal secretions may enter a more or less patent opening, the watery constituents becoming reabsorbed, and the residual salts, mucous, &c., left to form concretions. This is what I think may have taken place in the present case.

The first attack of peritonitis was probably due to the calculi ulcerating through the wall of the appendix, inducing an attack of peritonitis by their presence, subsequently becoming encysted, and eventually being discharged through the abscess in the wall of the abdomen. I am aware that gall-stones occasionally find their way out of the abdomen in a similar manner, and from the appearance of the calculi before you, one might be apt to hastily conclude they were gall-stones; but in many ways they differ from true biliary calculi. You will notice that these calculi are much lighter than gall-stones, there is no true laminated structure, and I understand from Dr. Oliver there is no trace of cholesterine. These facts taken together, with the absence of all symptoms referable to the gall-bladder, lead me to think that my diagnosis is correct. Before sitting down I should like to mention that notes on a somewhat similar case were read by Mr. Charters Symonds before the London Clinical Society, and reported in the *British Medical Journal* of May 22nd, 1885. In this case the late Dr. Mahomed diagnosed the presence of a concretion. This was cut down upon and removed, the opening into the appendix closed, and the patient recovered after a tedious illness. The great similarity of the symptoms in the two cases is very striking, and has helped to confirm me in the view I have taken of Mrs. B.'s case.

I have only now to thank the members present for the patient attention they have accorded me, and hope that their interest in the case is not lessened by the superficial and imperfect sketch I have given.

RESULTS OF MAJOR AMPUTATIONS TREATED ANTI-SEPTICALLY IN THE NEWCASTLE-UPON-TYNE INFIRMARY, DURING THE YEAR 1885.

By FREDERICK PAGE, Honorary Surgeon to the Infirmary and Examiner in Clinical Surgery at the University of Edinburgh.

I have much pleasure, sir, in submitting to this meeting of the Northumberland and Durham Medical Society the results of the major amputations which have been performed during the year 1885 in the Newcastle-upon-Tyne Infirmary. As will be seen by the following table, we have had 51 major amputations, with two deaths (3·9 per cent.):—

Table of Amputations treated Antiseptically in the Newcastle-upon-Tyne Infirmary during the Year 1885.

	FOR INJURY.			FOR DISEASE.			TOTAL
	No.	Cured.	Died.	No.	Cured.	Died.	
Hip Joint	0	0	0	3	2	1	3
Thigh	1	1	0	12	11	1	13
Knee Joint	1	1	0	0	0	0	1
Leg	1	1	0	5	5	0	6
Ankle Joint.....	2	2	0	9	9	0	11
Shoulder Joint	0	0	0	1	1	0	1
Arm	3	3	0	1	1	0	4
Fore-arm.....	5	5	0	6	6	0	11
Wrist Joint.....	1	1	0	0	0	0	1
	14	14	0	37	35	2	51

The amputations for injury, all primary, numbered 14, and there was no death. For disease, amputation was resorted to 37 times, and two patients died (5·4 per cent.) The fatal cases were a man, aged 30, whose limb was removed at the hip for extensive and long-standing disease of the joint, and who died six days after the operation from sheer exhaustion. The case was a most

unpromising one, and amputation was only performed at the earnest solicitation of the man and after a consultation of the staff. The other was also a male, aged 63 years, suffering from necrosis of the femur of long standing, for which the thigh was amputated close to the hip. Death arose in this case, too, from exhaustion eight days after amputation. Adding the amputations of 1885 to those of 1884 and 1883, we have a total of 156 major amputations with 8 deaths (5·1 per cent.)

Table of Amputations performed Antiseptically in the Newcastle-upon-Tyne Infirmary during the Years 1883-84-85.

	FOR INJURY.			FOR DISEASE.			TOTAL
	No.	Cured.	Died.	No.	Cured.	Died.	
Hip Joint	0	0	0	6	4	2	6
Thigh	9	8	1	38	36	2	47
Knee Joint	4	4	0	1	1	0	5
Leg	11	11	0	21	21	0	32
Ankle (Syme's)	7	7	0	17	16	1	24
Shoulder Joint	2	2	0	3	3	0	5
Arm..	11	11	0	3	2	1	14
Fore-arm.....	10	9	1	9	9	0	19
Wrist	4	4	0	0	0	0	4
	58	56	2	98	92	6	156

These are very different results from those obtained in general hospitals at the time the late Sir James Simpson wrote on Hospitalism. Then the mortality following amputation of the thigh, leg, arm, and forearm, for injury and disease, in seven provincial hospitals, viz., Liverpool, Dundee, Newcastle, Bristol, Aberdeen, Birmingham, and Margate, was no less than 28·3 per cent., that is to say one patient in every 3·5 died. Amputations for injury have been always looked upon as more fatal than those for disease. During the last three years we have had 58 with only two deaths (3·4 per cent.); while for disease we have had 98 with six deaths (6·1 per cent.), a reversal of results, but, as I think, an

accidental occurrence. The influence of the use of stimulants upon the results of amputation is a matter I should much like to bring before this Society as a subject for discussion. It is one of the very greatest importance, and well worth our attention.

In the Newcastle-upon-Tyne Infirmary it has been urged that more stimulants are used than are necessary. The results of our major amputations are very good, and it seems to me there can be no more crucial test of the efficacy of surgical hospital practice than the mortality following amputation. If it can be shown that other hospitals consuming less alcohol—such as Leeds, Liverpool, Manchester, and Sunderland—obtain as good results as Newcastle-upon-Tyne, then I think it will be incumbent upon us to show why it is necessary more alcohol should be consumed in Newcastle, or to acknowledge that more is used than is required. But if, on the other hand, a marked difference in results in favour of Newcastle should be the outcome of any such comparison, then I think it will be unnecessary for us to pursue the subject further.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

SESSION 1885-86.

FEBRUARY MEETING.

THE FIFTH MONTHLY MEETING of the Society was held in the Library of the Newcastle-on-Tyne Infirmary, on the evening of Thursday, February 11th—Dr. Fielden (President) in the chair.

ELECTION OF NEW MEMBERS.

The following gentlemen were unanimously elected members of the Society :—

F. C. Mears, M.B., C.M. Durh., North Shields.
Chas. Blair, M.D. Durh., M.R.C.S. Eng.
A. D. Mackay, M.B., C.M., Glasg., Esh, Durham.

NEW MEMBER PROPOSED.

Samuel Macaulay, L.R.C.P. Edin., L.F.P.S. Glasg., Jesmond Road.

CASE OF MYXŒDEMA IN A MAN.

Dr. GOWANS : Some years ago I had the opportunity of exhibiting before the members of this Society a female patient suffering from the disease to which Dr. Ord has given the name of myxœdema. I have to-night the privilege of showing you a male patient the victim of the same disease, who is at once a match and a contrast to my previous case. He is a match in so far as the aspect of my patient to-night is very much the same as in my previous case, but he is a contrast in that the disease is not nearly so far advanced. This man is 50 years of age, and about a year ago he first noticed his face beginning to swell. Previous to that he had enjoyed very good health, and never had sustained any mental shock. The general aspect of his face is markedly like that of the patient I showed before. Here is the same broad expressionless face, the

general aspect being that of a renal case, though the urine is normal in every respect, and there is no other symptom of Bright's disease. Here is the same bright patch upon the cheek ; the lips are swollen and thick, and the tissues of the inside of the mouth are also thicker and amplified. The skin is harsh and dry, and the epithelium peels off, and there is enlargement of the parotid gland. Dr. Ord demonstrated that the disease was due to the degeneration of the areolar tissue into mūcin. This degenerated tissue pads the peripheral ends of the nerves and accounts for the progressive loss of tactile sensation. This man is slow, ponderous, and deliberate in his manner and movements, but up to a recent period has followed his occupation as a grocer till he was compelled to give it up from a difficulty he experienced in picking up small articles from a flat surface, especially in giving and taking change. The neck, you will observe, springs from a broad massive base, which is caused by the obliteration or filling up of the triangles above the clavicle. Passing the finger down the middle line of the neck there is no isthmus of the thyroid to be distinguished, nor can the gland itself be made out. The theories which at present obtain as to the origin of the disease are, first, that it is due to a change in the sympathetic system and the basic ganglia ; secondly, to anæmia of the brain ; and thirdly, Dr. Horsley contends that the disease is entirely dependent upon the change in the thyroid body primarily. He bases his theory upon the results obtained by experiments on animals by extirpating the thyroid gland. In some cases he succeeded in inducing the disease, but where the gland had not been entirely extirpated myxœdema did not follow. In regard to the treatment of the condition Dr. Ord recommends jaborandi. I have given this drug a fair trial, but have not obtained any favourable results ; my own treatment has consisted in a combination of iron, strychnia, and phosphoric acid, and I am happy to say that the results of this treatment have been most encouraging. This patient is taking this mixture, and I think he already shows some improvement. I have formerly expressed the opinion that in these cases there must be some marked change in the blood. I had occasion to draw a tooth from my previous patient, and I found it almost impossible to stop the haemorrhage which followed. This man also had a severe bleeding some eighteen months ago. The opinion which now finds most support is that this disease is a consequence of the changes which take place in the thyroid gland. The thyroid, I think, has something to do with the elaboration of the blood, and when it is diseased the quality of the blood must suffer. Further into this interesting subject I will not at present enter, as I hope at a subsequent meeting to read a paper on the pathology of myxœdema.

Dr. PHILIPSON : The patient whom Dr. Gowans has shown us to-night is the victim of a very rare disease, and a disease that is especially rare in the male. This case is characteristic of the disease. The alteration in the conformity of the individual, and the absence of the thyroid body, are marked features. The surface over the whole of the body here feels doughy, but is resilient, and leaves no pit under the finger. I saw a case which had been under the care of my colleague, Dr. Oliver, a week or two ago. I was examining patients for the Whitley Convalescent Home, but there was something so distinctive in the woman's appearance, that before I knew what she had been sent for, I knew that I had here a case of myxoedema.

Dr. OLIVER : Personally I am much indebted to Dr. Gowans for bringing this case before us, and I would desire to call attention to one or two points. You saw that the man had a good head of hair, but his eyelashes have fallen out, and the hair which he ought to have over his body is absent, and this is what one looks for. The disappearance of the thyroid body, and the filling up of the supra-clavicular spaces, are also distinctive features of the disease. As the case advances urea will diminish, not from any extension of the disease to the kidneys themselves, but from the alteration in the blood. With regard to the haemorrhages so often noticed in these cases, almost invariably the outer coats of the arteries and arterioles become thickened as the disease progresses; and hence you have the vessels unable to contract, and when one of them is ruptured you have bleeding as from a rigid tube. I am exceedingly pleased to hear that Dr. Gowans contemplates a paper on the pathology of myxoedema. The subject is one full of interest, and such a paper would be a valuable contribution to the transactions of the Society.

TRANSVERSE FRACTURE OF THE PATELLA.

Mr. MORGAN : I have ventured to bring this case before you, not because of its rarity, but rather to show the remarkably good results obtained by a method of surgical treatment not often adopted in this part of the country. This man, a quay labourer, was brought to the Sunderland Infirmary suffering from a transverse fracture of the patella, sustained by the stroke of a heavy rope. There was a gap of three-quarters of an inch between the fragments. The treatment consisted in putting on a back splint and approximating the fragments by Malgaigne's hooks and fixing the limb. There was a good deal of pain complained of where the hooks entered, but this yielded readily and completely to a solution of cocaine painted on the parts with a brush. The hooks were kept on for 18 days, when they were removed and the parts were found firmly united.

Dr. FIELDEN: The union you have got here is ligamentous. The result is, I admit, remarkably good; but is there no danger of stretching?

Mr. MORGAN: The union is of course fibrous, but it is of a very close character, and I do not think there is any likelihood of stretching to an inconvenient extent.

CASE OF SPINA-BIFIDA.

Dr. BRADLEY: This child was born on the 6th of October last, and at the time of its birth I noticed a projection on its back, in the lower lumbar region, about the size of an orange. This growth was made out to communicate with the spinal canal, and on Nov. 8th, adopting Morton of Glasgow's plan, I injected, after withdrawing about half the fluid from the sac, two drachms of iodo-glycerine, and no bad effects were experienced. The child has got perfect movement in all its limbs, and is now in every respect a healthy child, and you will notice that the growth is quite shrunken. Morton stated the details of his treatment before the meeting of the British Medical Association at Edinburgh in 1875; but the solution that I used was iodine 10 grs., pot. iodid. 30 grs., glycerine ad. 1 oz. It is a very important matter, in my opinion, to drain out a considerable portion of the fluid from the sac before injecting.

Mr. PAGE: I have treated a case of this sort, but not with any great success. About a month ago I injected the proportion of Morton's solution, and for about two hours no apparent bad effect was visible. At the end of that time, however, the child had a violent convulsion and died.

Dr. LYONS: I had a case of this kind where the sac had burst, and where the skin round about was broken and ulcerated. The ulceration healed up, and the sac contracted after one injection; and though the child died five weeks afterwards, its death was in no way attributable to any result of the operation.

Dr. MURPHY: I have only had one successful case treated by Morton's method. That was one where the tumour was low down and covered by healthy skin. Mr. Mayo Robson, of Leeds, has proposed a new method of treating these cases, which has at least the merit of ingenuity.

TWO CASES OF CONGENITAL ICHTHYOSIS.

Dr. PHILIPSON: I bring before you here two brothers suffering from ichthyosis—fish skin—in both of whom the disease is congenital. Neither of the parents and none of the other members of the family have been so affected. Passing the hand over the

bodies of these boys, one feels the extreme roughness and dryness of the skin, and you find it is general over the whole surface, though the palms of the hands, the soles of the feet, and the axillæ are more slightly affected than the other parts of the body. The treatment has consisted in the application of glycerine diluted with water. The warm, vapour, and alkaline baths have, in other cases of mine, been great aids to the treatment, and warm bathing here will, I think, effect great good. In both cases the skin here is pigmented. As showing the rarity of this affection, I may mention that since a special skin department was opened in this Infirmary, four years ago, there have only been four cases of ichthyosis recorded, and in all these cases the condition was congenital. As a point of interest, I may state that the mother of these boys is at present under Dr. Arnison's care, suffering from necrosis of the tibia, and the younger boy was first brought under observation when he was brought into the Infirmary suffering from necrosis of the femur.

Dr. FIELDEN : In the only two other cases of this condition that I have seen the scabs were much darker, larger, and grosser altogether.

CASE OF EXCISION OF THE KNEE.

Dr. ARNISON : This is the patient whose case I described, but whom I was unable to show at our December meeting. The case is one of excision of the knee, in which a movable joint has resulted. As I said before, the movement here was quite an accident, as I believe it is in all the cases where excision has been performed. This lad at present gets about pretty well with the aid of a light hinged splint; but I hope that in time the joint may be strengthened, and he will be able to dispense with the splint altogether.

Dr. FIELDEN : I question in this case where the gain of ability to flex the leg is not more than counterbalanced by the feeling of insecurity which the boy must experience in trying to support himself on a leg which allows so much lateral movement. Dr. Arnison is to be congratulated on the result he has obtained; but his patient would, I think, have been more to be congratulated had he left the Infirmary with a stiff joint.

Dr. GOWANS : In a few months this will be, I think, a much more useful limb than it is at present. The muscles are at present atrophied from want of use, and that condition will improve as the boy uses the limb. I recall a case of Annandale's, where an almost perfect limb resulted from a case of excision of the knee, where movement remained after operation.

Mr. MORGAN: I am more inclined to agree with Dr. Fielden. In cases of excision we depend for support on the continuity of the limb. In this case you never can have a steady support until you have the lateral movement done away with; and that, I fear, you never will get quit of.

Dr. ARNISON: I agree with Dr. Gowans in that I hope we have not yet seen the best of this case. I think the knee will become stronger. Would it have been better as a stiff joint than as it is? I am inclined to think that a movable joint will be a more useful limb than if it had been stiff. It is right, however, that I should add that I have performed several excisions since knowing the result of this one, and in all of my last cases I have aimed at ankylosis.

PRIMARY EXCISION OF THE ASTRAGALUS.

Mr. PAGE: This man is, I think, sir, a very good example of conservative surgery. On the 5th of last November he fell a distance of 45 feet, alighting on his feet. He was admitted into the Infirmary soon after, suffering from a compound dislocation of the right ankle joint. The os calcis was fractured, and the articulating surface of the astragalus protruding from a large rent in the skin on the inner side of the joint. The house surgeon, Dr. Ridley, finding the articulation of the astragalus considerably disturbed, removed the entire bone. A free incision was then made on the opposite side of the joint, a large drainage tube inserted, and the limb carefully put up with gauze dressing on a swing splint. The patient has recovered with a useful limb, and I attribute the good result to the perfect drainage which it was possible to maintain by removing the astragalus. Compound dislocation of the ankle joint in the adult is a serious accident, very often leading to the death of the patient when an attempt is made to save the limb. The cases in my experience which have done best have been those in which the articular surfaces of the tibia and fibula have been removed. I have not before seen a case of primary excision of the astragalus — in this case it was certainly indicated. Whether, however, the ends of the tibia and fibula are removed or the astragalus, in both cases we have remaining a cavity which it is possible to thoroughly drain; whereas, if no bone be removed, it is exceedingly difficult to prevent fluids from accumulating and decomposing between the surfaces in contact with each other.

SARCOMA OF KIDNEY AND CARCINOMA OF FEMUR.

Dr. MORGAN: The man from whom these specimens were removed was, in 1880, a collier working in the pit. In that year he fell over a bar of wood, and, though stunned for a time, he

went on with his work. He passed urine freely afterwards, but on the afternoon of the same day he was seized with sudden and intense pain in the loins, and passed per urethram a quantity of almost pure blood. These attacks of haematuria recurred afterwards at intervals, about six weeks generally intervening between each attack. I was asked to examine him as to whether he was suffering from the result of the accident or from disease. This was about a year after he had sustained the fall. There was at that time no tumour in the loin and no stone in the bladder, and I never saw the man again till he died some time ago, when I asked for and obtained a *post-mortem*. There had been a small swelling on the front of his thigh all his life nearly where he had received a kick when a boy. This swelling was found at the *post-mortem* to be a carcinoma of the periosteum, and we also found the right kidney completely invaded by sarcomatous tissue, and a commencing sarcoma of the left kidney. The appearance of sections of these growths is beautifully illustrated by the sketches which Dr. Squance has kindly prepared for me. In this case, what had the accident to do with the condition found after death? If you say that the accident had nothing to do with the disease, then you may put a great hardship on the man's family. If, on the other hand, you say that the accident was the cause of the disease, you may put the hardship upon the Miners' Union, which has to pay compensation. Virchow was the first, I believe, to raise the question whether sarcoma of the kidney was due to injury; but I am unable to find any case in which satisfactory proof has been adduced of sarcoma having arisen from traumatic cause.

Dr. FIELDEN: Some years ago I exhibited to the members of this Society, a thigh removed at the hip-joint for malignant disease resulting from an injury. Four or five months afterwards the lad died from cancer of the kidneys and lungs. I also showed a case of malignant disease of the kidneys, where diagnosis was obscured and rendered nearly impossible by fluid in the peritoneal cavity.

Dr. HUME: It is an admitted fact that injury to an organ is sometimes followed by malignant disease in the organ. Of this we all have had experience in the matter of cancer of the breast. Then there is no reason *a priori* why cancer of the kidney should not have its origin in the same way. Further than this belief in its possibility, however, I think you cannot go. You do not get one gross result immediately following an injury; the disease must take some time to develop, and the difficulty must always arise in knowing just how much of the result to ascribe to the alleged injury. A case occurs to my mind where a man died from abscess of the brain. He sustained a slight blow on the head, and some months after the injury he died of abscess of the brain. In this case the same difficulty arises as in Mr. Morgan's case.

I think that malignant disease of the kidneys nearly always takes the form of sarcoma, and sarcoma is much more common in the earlier decades of life than later on. What strikes me as peculiar in Mr. Morgan's case is that there should be one kind of malignant disease in one part and another in another. I should like Dr. Squance to tell me on what he bases his belief that the growth on the femur is a carcinoma. To my mind the drawings would show that the growth is certainly sarcomatous. In the kidney one would expect the growth to be small-celled, because the areolar tissue is very fine. One does not, however, expect the cell formation to be so fine in a growth arising from periosteum.

Dr. BROADBENT: I examined this man on behalf of the Miners' Permanent Relief Fund three years after the accident ; he had at that time no marked symptoms except his cachectic appearance, and I gave a guarded certificate that he was suffering from the result of accident.

Dr. SQUANCE : I examined the kidneys and the growth on the femur with the following results :—

Right kidney measures 9 inches in length, 5 inches in breadth, and 4 inches in thickness, and weighs 2lbs. 7oz. The surface is smooth and irregular, with several rounded protuberances, which are of a greyish colour, the rest of tumour being reddish-green. To the touch the growth is firm and somewhat elastic, and the ureter is noticed at its lower border. On cutting it open, the kidney structure is found to have entirely disappeared, the whole mass consisting of a yellowish-white material with soft cheesy portions (which break down when firmly touched) interspersed. On scraping the surface a milky juice exudes. The surface protuberances are much firmer, whiter, and somewhat translucent, presenting many haemorrhagic points. The left kidney measures 5 inches in length by $2\frac{1}{2}$ in breadth and $1\frac{1}{2}$ in thickness. The capsule strips off easily, leaving a smooth surface with two or three small cysts containing a clear yellowish fluid. On cutting into the kidney the cortex is seen to be pale, while to the touch the organ is somewhat greasy, soft, and putty-like. The tumour from thigh was yellowish-white in colour and firm to touch.

Portions of growth from surface of right kidney and tumour of thigh, when placed in water and pressed, did not render it milky, while a portion removed from medulla of kidney broke down at once, making water turbid.

Microscopic Appearances.—A section from one of the nodules shows that the kidney structure has disappeared, with the exception of the remains of some of the Malpighian tufts, around which there is a large amount of fibrous tissue. The bulk of the new growth consists of small round-celled sarcomatous tissue. A sec-

tion from the medullary portion shows sarcomatous tissue arranged in alveoli. A section from the left kidney shows that the epithelium is swollen and granular, and undergoing fatty degeneration ; while between the tubules there is a new connection tissue growth with many nuclei, and masses of sarcomatous cells are noticed in portions of the structure. The growth from the thigh is a carcinoma, in which the characteristics of the scirrhus variety predominate.

Referring to what Dr. Hume has said, I think that in regard to the kidneys there can be no doubt that the growth is sarcomatous. In regard to the growth from the femur, I was very doubtful about it myself, and sent one of the sections for examination to Dr. Byrom Bramwell, who concurred with me that it was carcinomatous. The large cells in the section I can only account for by some cells of the epiblast having been left behind and taking on action later.

FIBRO CYSTIC TUMOUR OF UTERUS.

Mr. MORGAN : In June last I first saw the patient from whom this growth was removed. Her general health was very bad, and there was almost incessant heavy loss of blood from uterine haemorrhage. She also suffered very great pain. We determined to operate, and if the tumour was found to be a fibroid and irremovable to remove the appendages ; but on cutting down I failed to find the appendages, and therefore I removed the entire mass. The stump of the uterus was first secured by a Kōchelle's serre nœud, and then by a wire-rope ecraseur. The uterus and tumour were then removed by oblique incisions on each side, and the wedge-shaped sides of the stump carefully brought together after all bleeding points had been taken up. Drainage was secured by a tube through the os uteri, and another through the abdominal wound. The patient was very much collapsed after the operation, but rallied wonderfully during the day. Next day she was apparently very well, and I allowed her some beef tea, but after the second allowance of the tea she was seized with violent vomiting, and rapidly sinking, died during the night. The *post-mortem* showed no recent peritonitis, no haemorrhage and no inflammation of any kind, and she had evidently died from the shock to the sympathetic system which so many of these cases die from. The ovaries, which could not be found at the time of the operation, were found *post-mortem* low down on each side of the stump.

Mr. PAGE : When it is found that nothing short of removal of the whole uterus will remove a patient's symptoms, my advice would be don't remove it. On two occasions within the past two years I have removed the whole uterus, and both patients died. It is a most formidable operation, and in any subsequent case that

may come under my care for treatment, I shall depend upon the results obtainable by removal of the appendages. We have not had from the latter operation any bad results. Mr. Morgan's operation for the removal of the whole of the uterus deserved a very much better result, and had I not made up my mind never to perform the major operation again, I think I should adopt Mr. Morgan's method.

Dr. GOWANS: I think in most cases removal of the appendages is sufficient. I know of two cases where the appendages have been removed—one by Mr. Page, the other by Dr. Keith—and both have done very well.

Dr. SQUANCE: I have examined, microscopically, the tumour removed by Mr. Morgan, and find the growth to be made up of bundles of fibrous tissue with muscular glunents interlacing in all directions. In some portions there are small cysts containing a unicord tissue. The growth generally is very vascular. On cutting into it about three-quarters of an ounce of straw-coloured fluid escaped, which coagulated spontaneously, and under the microscopo showed fibre cells. The uterine wall is very much hypertrophied, and consists of ordinary fibre cells of areolar tissue, with large numbers of nuclei. In one or two places it appears to be undergoing cystic degeneration.

Mr. MORGAN: There is a great difference between myoma of the uterus and fibro cystic disease. In this case no good could have been done by simply removing the appendages. The woman died from shock, and the result, in my opinion, was not influenced by the intra or extra peritoneal method of treating the pedicle.

Dr. HUME: There was a case shown at the last meeting of the Society which has some bearing on this case. If you stop menstruation in these cases you stop the loss of blood and decrease the supply of blood to the uterus. In these cases I can bear Mr. Morgan out that it is very difficult to get at the appendages, very much more so than in an ordinary ovariotomy.

Dr. MURPHY: The specimen which Mr. Morgan has just shown opens up one of the most important questions of the day as regards abdominal surgery, namely, the surgical treatment of uterine fibroids, and the first point to consider is whether we should interfere surgically with these tumours, and if so, whether by the *indirect* method of removal of the appendages, or by the *direct* method of removal of the tumour itself, either with or without the uterus.

We must bear in mind that the natural history of a uterine fibroid is different from that of other tumours, markedly so from an ovarian cystoma, for while the tendency of the latter is to increase

as long as the patient lives, and eventually to destroy life, frequently also assuming a malignant character, the fibroid is a disease of middle or advanced life, which never assumes a malignant character, generally ceases to grow, and sometimes lessens or even disappears after the menopause, and but seldom destroys or even threatens life; and I would put it to those members of the Society who like myself see yearly a large number of these tumours, how often have they seen death caused by one. For myself I may say I have never known of a single instance. Still it must be confessed in a considerable number of these cases the menopause is indefinitely postponed, and the constant floodings and pain make the patient's life a burden to her, more especially when she has to work for her living and cannot afford to lie by now and then, and where the hypodermic injection of ergot fails to give relief; and in such cases, of which Mr. Morgan's case was an example, we are bound to attempt to give relief by surgical means.

The modern operation of removal of the uterine appendages was first employed by Trenholme, of Montreal, for the relief of fibroids, and has since been extensively practised, and in some cases has given marked and undoubted relief, and has numerous and enthusiastic supporters; but what I would wish to see is a large number of patients that have been thus operated on, and see them and examine them for myself; and had Dr. Arnison been present, I would have asked him to let us have an opportunity of examining the first case he operated on, which I believe has done extremely well. For my own part, I have not seen many who have undergone the operation, and of those I have seen, some were no better and three had hysterectomy subsequently performed. One of those three, a patient of Dr. Lambert's, who is here to-night, was operated on by Dr. Bantock. Further, the operation is one of considerable difficulty and danger, as even Tait himself, at the London International Congress, reported twenty-six operations with five deaths; and finally, as I have shown, and as is, I think, now generally admitted, the operation is not reliable in controlling the haemorrhage or the growth of the tumour, and we are not yet in a position to tell beforehand the cases in which it will succeed. It therefore is well to consider how, in the very small number of cases in which an operation is justifiable, the whole tumour can be best removed, and the extra or intra-peritoneal treatment of the pedicle is the great question which has yet to be settled.

It is claimed for the extra-peritoneal treatment that it secures the pedicle more safely, as, owing to its large size and firmness, it cannot be efficiently secured by a ligature as in the case of ovariotomy, and its chief supporters are Péan, Hegar, Kaltenbach, Tait, Thornton, and Keith. So far it has given the best results, with the single exception of Schroeder's cases, which have been treated by the intra-peritoneal method.

Péan's method (extra-peritoneal) is as follows :—If necessary he reduces the size of the tumour *morcelement*. It is then drawn out of the abdomen, and held by an assistant. A sound is then introduced into the bladder to ascertain its relations, and the cervix is transfixated with two strong wire ligatures at right angles. Below this a curved needle is passed through the cervix, bringing back a double wire. This is divided, each half is fitted into Cintrat's serre-nœud, and then twisted. The tumour and uterus are amputated above the wires. The pedicle is left in the lower angle of the wound, the wires and serre-nœud being left in position.

Hegar's method by elastic ligatures (extra-peritoneal). Temporary sutures are placed along the margin of the abdominal incision to keep the peritoneum in relation to the skin. Adhesions, if vascular, are ligatured in two places, and then cut through between them. An assistant raises, with a dry towel, the tumour, while the edges of the abdominal wall are pressed together behind the tumour as it is withdrawn. The elastic ligature is placed around the cervix below the point of amputation. This consists of a durable india-rubber ligature, five millemetres thick. At full stretch it is brought around the uterus and knotted. If this be insufficient, it may be ligatured in two portions. A double ligature carried by a peculiar needle is passed through the stump, which is then divided and tied around each half; the growth and uterus are then amputated above. Now, around the neck of the stump and below the elastic ligatures, the peritoneum is carefully adapted, and the silk suture, which brings only the edges of the peritoneum together in the bottom of the wound, just below the pedicle, is looped into the side of the latter underneath the ligature. Next the margins of the peritoneum, above the pedicle, are united in a similar way; the next two sutures of the wound bring together only the peritoneum, while those further up bring together all the coats of the abdominal wall. Thus there is produced a space which surrounds the pedicle and is floored by peritoneum. This is treated antiseptically. The projecting end of the stump is thoroughly cauterized; the raw surfaces around it are painted with a solution of three to ten per cent. of chloride of zinc, and cotton wadding which has been soaked in a two percent. solution of chloride, and then thoroughly dried, is packed around the stump. Finally, the end of the stump alone is touched with one hundred per cent. solution, the whole is covered with protective silk and carbolized wool, and the antiseptic dressing laid on so that it can be easily lifted. The elastic ligature is cut away about the tenth day, the space around the stump having been kept thoroughly dry, and the pedicle trimmed gradually with scissors to diminish its size, and to allow free action of the chloride of zinc. Preference is given to a long incision.

Keith uses Koeberlee's serre-nœud, and Lawson Tait a clamp of his own invention.

The intra-peritoneal method has been very unsatisfactory except in the hands of Schroeder, and his method is as follows :—Vascular adhesions are ligatured at two points, and divided between them. The ovarian arteries are ligatured on each side. The cervix is pierced by a double silk ligature from behind, coming out at the bottom of the vesico-uterine pouch in front. This being then divided, the end of each half is carried backwards through the broad ligament of its respective side external to the cervix, and knotted to its corresponding end. The mass is then cut away above the ligatures in such a manner as to leave a strip of the peritoneum like a frill around the muscular surface of the stump. Then the surfaces of the stump are brought together, first the mucous membrane is united by sutures, which are cut short; then the surfaces of muscular tissue are firmly secured in contact by sutures, not involving the peritoneum; and finally the projecting ring of the peritoneum, which has been kept for the purpose, is brought together over the stump, an elastic ligature put around the cervix before cutting away the uterus, and removed when the stump is sutured.

The results, as far as I have seen published, of variors operations, are as follows :—Bantock, 22 operations, 20 recovered, 2 died; Keith, 18 operations, 2 died; Tait, 30 operations, 10 died; Wells, 40 operations, 21 died; Thornton, 25 operations, 9 died; Koeberlee, 19 operations, 10 died; Hagar and Kaltenbach, 12 operations, 1 died; Péan, 52 operations, 18 died; and Shroeder, 50 operations, 15 died, so that, even in the hands of the most able surgeons, the mortality is still very great.

WOUND TREATMENT.

BY J. RUTHERFORD MORISON, M.D., F.R.C.S., Edinburgh.

Mr. PRESIDENT AND GENTLEMEN,—

It is with some diffidence that I venture to bring before the Society this communication on the subject of wound treatment. My apology must be that for some years I have diligently thought over and worked at this subject, and have realised to a large extent practically what I supposed theoretically.

In 1878 I read a paper before the South Durham and Cleveland Medical Society on this matter, and in 1881 published the same (little altered) in the *Birmingham Quarterly Review*. In those papers the same principles were advocated as I am here to uphold to-night. Additional experience has served to convince me of their truthfulness and utility. At the onset I must confess myself a convert of Sir Joseph Lister's, and state my belief that when his details can be carried out in their entirety, wound complications of any sort are practically averted. There can equally, I believe, be little doubt that any mistake, allowing of putrefaction, leaves the wound and the patient in a worse plight than if no carbolic acid had come near the wounded surface. It will be allowed that the frequent removal of dressing, and with each the risk of wound contamination, the need of skilled assistance during the dressing, the carrying to and fro of the spray, the time spent in getting up steam, and the difficulty of making proper arrangements in a private house for all these complicated details, prevent a medical man in active practice from carrying out the ordinary Listerian formulæ. If I can prove that the antiseptic treatment may be carried out with ease to the practitioner in the house of his patient, to the saving of trouble, danger, and expense to the patient, then the object of my paper will have been gained; but, if I can persuade you that the ordinary method of antiseptic wound treatment is faulty in many of the requirements for physiological wound healing, and can indicate a direction in which more perfect results are to be sought, and I believe found, it will add to my satisfaction.

The most uniformly satisfactory results in healing of wounds made by the surgeon are obtained by the subcutaneous method of operation. (In this class such operations as MacEwan's osteotomy should be included, as they are practically subcutaneous.) It may, therefore, serve a good purpose to consider in what respects subcutaneously, made wounds differ from open ones, and to ascertain if a closer imitation of the conditions favourable to subcutaneous healing may not lead to better results than those forms of wound treatment ordinarily adopted. In such a wound

(1.) Air and chemical irritants are excluded. (2.) Pressure is exercised on the wounded structures by the undivided elastic skin. (3.) Heat is retained by the undivided superficial parts. (4.) There is no mechanical interference with the wounded structures, no dressing, no drainage tubes, no removal of sutures, no expulsion of ligatures. Such a wound will heal with a minimum of pain, constitutional disturbances, or inflammatory swelling—the equivalent to serous oozing of the open wound. Of the four conditions favourable to the healing of subcutaneous wounds I have put in order of merit.

(1). *Exclusion of Air.*—That asceptic air does no injury to a wound is universally taught, and as I cannot doubt that the carbolic spray destroys all injurious matter in the air, then my belief is that the antiseptic method makes the open wound equal to the subcutaneous one so far as concerns this first condition, with one exception. The one drawback of the antiseptic to the wound is that irritation follows its use, and as an important consequence serous discharge results.

(2.) *Pressure as exercised by the undivided skin and superficial structures.* In simple cases, e.g., dividing tibialis postiens, where the tissues are young and elastic their unaided elasticity is sufficient to secure perfect recovery without pain or swelling. That pressure is an important preventive of these complications (pain and swelling) in subcutaneous operations, may be proved by performing subcutaneous section of the contracted hamstrings on both legs of an individual unfortunate enough to require this measure.

On one leg, after tenotomy, close the puncture with collodion and do nothing further. To the other apply a bandage from the toes upwards and firmly over a thick layer of cotton wool wrapped round the limb from below the knee to the middle of the thigh. If about the seventh day the legs be examined, the first will be found still swollen, tender, and deeply discoloured; the second will be free from tenderness or swelling, with traces of green discolouration remaining. The importance of properly applied firm pressure, as a principle in surgery, is not, in my opinion, sufficiently recognized. As a curative measure it has been extensively and successfully adopted; but as a preventive of inflammation, in its results it has passed unnoticed. Yet there is no single item of wound treatment so important in limiting the inflammatory process to constructive action.

The series of cases used later as illustrations may not serve sufficiently to show my respect for firmly-applied pressure, so at the risk of becoming tiresome, I will impress this with examples. Whoever has excised a wen from the head antiseptically or otherwise, will remember thinking the wound left a trifling one to drain, and covering it up with a dressing without having taken this pre-

caution. Healing of the wound takes place, if not purposely prevented, by first intention. Pus forms in the cavity, union (at first apparently perfect) breaks down, and healing is delayed to the disappointment of patient and surgeon. A pad covering the wound and pressed upon the surrounding tissues by a firm bandage prevents this trouble and makes drainage unnecessary. The following case illustrates well the powerful effect of pressure in limiting reaction, unfortunately in this case for evil:—

After performing on a girl of 23 the ordinary plastic operation for new nose, with flap from the forehead, I sluiced the forehead gap with carbolic glycerine 1:10, sprinkled it with iodoform, and covered it with a thick pad of wool, fixed by a firm bandage round the occiput. As no complaint was made of pain, and there was no discharge, this was left untouched for three weeks. The nose being then healed, the dressing was renewed, when, to my disappointment and surprise, I found the wound precisely as when made, with the exception that the edges were glazed with a thin layer of lymph. A few days after, under ordinary dressing, the whole surface was granulating satisfactorily, and healing quickly followed.

Again, why have plaisters such a popular reputation for preventing gathered breasts? Because they often succeed, and will always succeed if well applied and in proper time. Not on account of the medicinal substance contained, be it even belladonna, but because inflammatory congestion of the breast may be prevented, possibly not cured, by carefully-applied firm pressure. As a last example, allow me to point to the healing of ulcers under Martin's bandage. Pressure and retention of heat are here the important elements. Secure these by any means, and healing will similarly progress. To proceed with the subcutaneous wound—

(3). *Heat* is retained by the undivided superficial parts. In no vital process is the value of heat more evident than in the healing of wounds. Does heat not play the important part in wounds of the mouth, where, in spite of the frequent movements to which they are subjected, the constant contact with foreign material, and the septic atmosphere by which they are surrounded, healing readily and rapidly occurs.

(4). *There is no mechanical interference with the wounded structures* :—No dressings, no removal of sutures, no drainage tubes, and no ligatures to expel as foreign bodies. It must be apparent that the absence of all these disturbing influences is a considerable factor in securing that perfect rest necessary for perfect repair.

So far it has only been my endeavour to suggest those principles which should be the surgeon's guide in wound treatment. Going now from principles to practice, I will first describe my procedure, a modification of the ordinary antiseptic method, and its results.

Take a case of excision of the breast and axillary glands as an example. The hands of the operator and his assistant, and the skin of the patient, are first thoroughly purified with strong carbolic lotion, the instruments kept in a 1·40 solution, and the spray turned on the site of the operation, which is completed in the usual way under the spray. Sponges wrung as dry as possible out of 1·40 lotion are used to find the bleeding points. These are ligatured with carbolised catgut ligatures, long enough when tied to allow of both ends hanging out of the axillary end of the wound. Every possible bleeding point is ligatured. The ligatures are now collected into one bundle, which is left hanging out of the most dependent part of the wound. The skin flaps are brought into close apposition over the raw surface and the body of the ligatures by a continuous suture of thick catgut, the needle carrying which is introduced and emerges about a quarter of an inch from each margin of the incision, giving the suture a good bite of the tissues. In the interval between each visible loop of catgut a fine interrupted suture of catgut is placed, bringing the skin edges into perfect apposition. The surface and arm are now cleansed, the tails of ligatures cut off flush with the wound at their points of exit, and the whole covered with a thin layer of gauze wrung out of 1·40 carbolic lotion. A small pad of wool is now placed over where the ligatures emerge and covered by another long narrow pad, the upper end of which fills the axilla, and the body of which is placed downwards against the lateral chest wall and kept in position by the upper arm pressed against it. The dressing is completed by a pad anteriorly and a large pad posteriorly, reaching from the spine well round the upper arm and from the shoulder tips to the elbow. The dressings and arm being held firmly in position, the patient is drawn up over the head of the table, and the arm with the dressings are firmly bandaged in position with a long, broad, and strong flannel bandage, only half of the fore-arm being left free.

The course of a case so treated will be as follows:—On the second evening after operation, the temperature will reach its highest record, 99° to 101°; on the fourth day the patient will sit up in bed; from the fifth to the seventh day she will get up, walk to a chair, and sit up for a time; from the tenth to the twelfth day in fine weather she will get out; from the fourteenth to the twenty-first day, depending on stoutness of patient, the dressing will be removed for the first time, and the wound will be found firmly healed, with the exception of a granulating area from the size of a 3d. bit to a 1s. piece over the site of exit of ligatures. In the dressing will be found the dried and unabsorbed remnants of catgut sutures and ligatures, and some bloody staining, the result of from $\frac{3}{4}$ i to $\frac{3}{4}$ i of discharge. The fixed position of the arm

and some aching of the back are likely to be the only complaints when pain is enquired for. Such has been the exact course followed in my last eight cases of excision of the breast, without open sore, except in the last case. This was an old lady of 73, for whom, by mistake, chromic acid catgut sutures were used. These sutures had not been absorbed at the end of three weeks, and on their removal left little punctures, which prolonged healing. In three of these eight cases the axillary glands and surrounding cellular tissue were cleared out of the axilla.

Of the last four amputations I have performed, two have been perfect in result. The first, a boy whose foot and leg were smashed on the railway. Amputation by two equal antero-posterior flaps was done below the middle of the leg. Healing was complete in a fortnight, when the first dressing was taken off. There was no rise of temperature, and no complaint of pain was ever made.

The second, a patient 33 years old, with advanced chronic phthisis, had painful suppurating strumous disease of the wrist. Amputation of the forearm below the middle was performed by equal antero-posterior flaps. This patient never went to bed; was out walking next day; and at the end of a fortnight, when the first dressing was removed, had healed, except a small granulating area which closed in a few more days. The third, a patient 63 years of age, for advancing senile gangrene of the foot, had her leg amputated by Spencer's method—a long posterior flap at the seat of election. The first dressing was removed, under the spray, three weeks after the operation. No discharge had appeared through the dressing. The flap was found immuted in front, and at this part, three inches across and one inch vertically in the centre, the skin and cellular tissues were gangrenous. A similar dressing was reapplied, and at the end of a week the wound was redressed and the slough found not to have increased. At the end of three weeks again, curiosity prompted an examination of the stump. The slough had separated, and a healthy granulating surface was exposed. Another dressing was left on for six weeks, when the stump was found to be firmly healed. In this case the temperature and pulse were normal throughout, but pain was constantly complained of in the stump. As this pain continues, it is probably due to the hyper-aesthetic state of the patient, who aggravates her ailments by indulging in laudanum and whisky. The fourth case. Patient at 67. Amputation by equal antero posterior flaps at lower third of leg, for strumous disease of lower end of fibula ankle-joint and tarsus. The operation was done in the afternoon, with failing light. The vessels had to be secured by the light of a candle, and possibly some detail of the antiseptic was interfered with. The result was that a stain appeared on the dressings on the third day, when they

were removed by his medical attendant, under whose care he recovered satisfactorily with ordinary dressings.

In compound fractures, my experience has been that free oozing occurs for the first three or four days, probably in part on account of the antiseptic employed to correct the mischief already done by exposure, and in part to the discharge from the broken bone surfaces. After two or three dressings, they may be put up permanently with the dressing I have indicated, and a plaster bandage, the catgut skein of Professor Chiene being first introduced at a dependent opening.

Treated in this way, a compound fracture will occasion little trouble, and will usually be found united and healed at the end of eight or ten weeks.

In my last case of excision of the knee, in a boy of eight, the first dressing was removed on the third day. The dressing was renewed with a plaster bandage from the toes, up the leg, and round the pelvis. Nothing further was done for six weeks, when the dressing was taken off and the wound found to be firmly healed. I have always found it necessary to change the dressings once or twice during the early days, when a bone has been divided, as oozing occurs from the cut surfaces which cannot be controlled by external pressure.

In the case of removal of tumours, if the wounded surface left is in a suitable position for the effectual application of pressure, and the thorough carrying out of the antiseptic system, I never fail to get healing with one dressing. For large tumours of the neck, an elaborate bandage covering the head, neck, and upper part of the chest, fixed below by a turn round the upper arms and held rigid by a starch bandage over all, seems to me the best method of using a permanent dressing in this situation.

But every method has its disadvantages. Here these are :—

(1). The great care required at the operation and in applying the first dressing, and the consequently longer time that the patient is kept on the operating table. The chief cause of failure, I believe, to be want of the strictest attention to antiseptic precautions. In three cases of fumigating breast cancer I have failed to purify the surface sufficiently to get a perfect result. To call a profusely suppurating wound antiseptic because the discharge smells sweet, is absurd. All such discharge has been proved to teem with bacteria. Sir Joseph Lister teaches that suppuration in a wound arises only from putrefaction, tension, or antiseptic irritation, and he impresses always the fact that in a properly-drained antiseptic wound there should be no pus formation, and it cannot be too strongly insisted on that there is not. Only this high standard of antiseptics will suffice.

(2). The objection that if after bleeding occur such an amount

of blood may be lost into the dressings before its appearance externally as to prove dangerous.

(3). That the patient and surgeon have not the satisfaction of seeing how things are going on.

(4). That failure means loss of time and trouble wasted.

These objections scarcely require an answer. Success, with greater ease, is acquired by increased experience.

To conclude. (1). All operations, when possible, should be performed with antiseptic precautions. (2.) When this is done, a single dressing should suffice in the majority of ordinary surgical operations, such as amputation of breasts, limbs, or tumours. (3). This does suffice if the principles underlying the healing of subcutaneous wounds be recognized and acted on. (4). My method has been sufficiently indicated and is shortly :—

(a.) To render the air asceptic with carbolic spray.

(b.) To exercise firm pressure with a soft absorbent pad impregnated with a non-volatile antiseptic.

(c.) To retain heat by securing early union, and by a warm dressing.

(d.) To disturb the wound as little as possible by using non-irritating early-absorbable animal ligatures, which serve sufficiently for drainage purposes if undue sluicing of the wound with antiseptics be not indulged in, and by using the same material for sutures.

Dr. FIELDEN : We are all very much obliged to Dr. Morison for his very excellent, suggestive, and practical paper, and I hope that it may be the means of throwing more light on the merits of antiseptic surgery. The paraphernalia required for the full observance of the Listerian method deters most country surgeons for adopting it, but from a modified Listerism we get very good results. Often before the introduction by Lister of the carbolic spray we got satisfactory results in amputations and other large wounds from simple water dressings, though I by no means say that these results were so good, so rapid, or so certain as those we can now obtain by the use of antiseptics. I am however a firm believer in antiseptic surgery, and I do not think that even Dr. Morison's paper is necessary to convert the majority of this society. I consider strict Listerism of more consequence in hospital practice than in the country where the air is comparatively pure.

Dr. LYONS : I have found several difficulties in adopting dry dressings. I don't find that any of these dressings have the absorbent powers attributed to them. In my experience they have absorbed to a certain point and then caked hard, forming a dense impermeable covering to the wound. Indeed I have yet to meet with a dressing which will completely absorb the discharges.

Dr. HUME: I should like to touch on one or two of the points wherein Dr. Morison's method differs from the ordinary antiseptic treatment. First, he uses the spray but does not douche the wound; second, he does not drain the wound; and third, he uses a fixed antiseptic. I don't think we get here the results that Dr. Morison alleges. I see more suppuration than he does, but Dr. Morison has attained a perfection that I am only struggling after. I never use the spray in private practice, and my operations in private do as well as those which I perform in the hospital. But for all that I do not intend to give up the spray in hospital work. If one uses the spray he does not require to douche the wound, and if one does not douche the wound he can use a much smaller tube. Taking, for instance, Dr. Morison's method in removal of the breast, I must candidly admit that I could not adopt it. When you remove the breast and empty the axilla there is always a pouch left, and I do not see how that pouch is to be kept clear of matter except by the insertion of a drainage tube. I have tried Chiene's bunch of catgut, but gave it up as unsatisfactory; wood wool I have used with sublimate gauze, and have found it a most excellent dressing, and one that can be left on much longer than any other kind.

Dr. LAMBERT: During the last four years I have discarded the spray in every operation except ovariotomy. Within the last year I have excised seven breasts, and in all these used dry dressings (corrosive sublimate) and the results were most satisfactory.

Mr. PAGE: Twelve years ago, before the general adoption of antiseptic precautions, the mortality from operations was 12 per cent., now that has been reduced to 5 per cent. under Listerism. I do not believe that Lister's method is the sole system under which these results can be achieved. A hundred years ago, in the Liverpool Infirmary, they got as good results as Lister now does, and Gamgee and Callander in our own time have got as good results by different methods. There must be something in common to all these methods which give so excellent results. The results, in my belief, are not so much due to the use of antiseptics as to the amount of care bestowed on the first dressing. Close up the wound and keep the part at rest, see that your flaps are properly adjusted, secure proper drainage, firmly bandage and fix in an easy position. These are the essentials, and if they are thoroughly attended to, I do not think it matters very much whether you use an antiseptic or not. In the vitiated air of an hospital we would not be justified, however, in giving up the proved germ destroying aid of the spray.

Mr. MORGAN: There is one system which is not sufficiently brought forward in discussions of this nature, and that is the system of common sense. I do not think that Lister's system

would have had the success it undoubtedly has had, if it had not necessitated the most scrupulous attention to cleanliness. It has struck me once, and once again, that the way in which the so-called Listerism is carried out does not give the system a fair chance. It is seldom properly carried out—the absolute cleanliness necessary is not always attended to. Hilton in his most admirable book pointed out that rest was a great factor in wound healing, and I think the experience of every surgeon will bear him out in that.

Dr. MURPHY: Let anyone ask himself if he truly carries out the Listerian treatment, and I think that in nearly every case the answer must be in the negative. We are not sufficiently careful in attention to detail. We get in the way of the spray, or we let it play on some other part than the seat of operation; in fact we neglect the hundred little things that are in the aggregate the secret of the success of Listerism. While not much believing in it, I have got very good results with wood-wool as a dressing, though it will be found that absorbent wood will pick up much more of the discharge than wood-wool will.

Dr. FIELDEN: I remember a case in my own practice of a miner who suffered an injury to the abdominal walls, through which the bowel protruded. The gut was abraided, dirty, and coated with a thick coating of coal dust. The treatment in that case consisted in thoroughly cleansing the bowel, as thoroughly as we were able, and returning it to the abdominal cavity. The edges of the wound were then brought into close apposition and retained by a broad bandage, opium was given to soothe pain, and complete rest in bed was enjoined. So far as the abdominal wound was concerned the man did very well, though no antiseptic ever was used in the case. He was very much injured otherwise by the accident which ruptured the abdominal wall; but this particular wound never gave rise to one unfavourable symptom.

Dr. MORISON: I do not think that results such as I have detailed are possible without antiseptics. At the same time I believe that if the antiseptic treatment cannot be carried out in its entirety, the less chemical antiseptics you use the better. For the method I have sketched, however, I claim that, if strictly followed out, a surgical case after the first dressing requires no more attention than an ordinary medical case, and this saving of time is to those engaged in general practice a very important matter.

RESULTS OF THE TREATMENT OF AMENORRHœA BY POTASSIUM PERMANGANATE.

By THOMAS OLIVER, M.D., M.R.C.P., Physician to the Infirmary, and Physician in charge of the Department for the Diseases of Women, Infirmary, Newcastle-upon-Tyne.

Since the attention of the medical profession was drawn by Ringer to the beneficial effects of potassium permanganate in promoting the menstrual flow, I have given the drug a very fair trial in a number of cases both in private and hospital practice. My experience has been satisfactory. Most of the patients treated have been unmarried women, varying in age from 17 to 35, and I may add that most of them had already menstruated, the menses by degrees having gradually disappeared. To a class of cases characterized by general indications of plethora, the subjects of which complain of a sense of weight in the abdomen, constipation, of headache and flushings of the face, I do not at present refer. These are best treated by local detergents, the use of warm hip or foot baths, and by purgatives.

The largest number of sufferers from amenorrhœa are girls varying in age from 17 to 25 years—girls who have menstruated for a year or two, and who either as the result of overwork in close confined rooms, or as the result of malnutrition become anaemic. Concurrently with this, the menstrual flow which had been gradually diminishing in quantity, and was not of healthy quality, ceases altogether. These cases are well known to us. Their general pallor and breathlessness betoken an impoverished condition of blood, from which it seems all but impossible for a withdrawal of the elements composing the catamenial flux to take place. These are the cases in which we are apt to have ulcer of the stomach either painfully or insidiously developed—cases of amenorrhœa which have hitherto been treated, many of them not without benefit or success, by the administration of iron, with or without purgatives, just as the case required. Without in any way disparaging a line of treatment which has been beneficial, I believe that in the proper administration of potassium permanganate we have a means of bringing to a more successful and rapid issue cases of amenorrhœa associated, most of them, with anaemia. Alkalies are in all these cases just as much wanted as iron, and until I began to use potassium permanganate, I generally and frequently with very good results preceded the administration of iron by alkalies. Without offering any explanation as to the therapeutical action of manganese, but again reminding you that my best results have been obtained in cases of amenorrhœa with anaemia, I shall give you briefly some of my experience.

M. C., æt. 18, anæmic, had not menstruated for four months. Ten days after taking pil. pot. permang. menses reappeared, and she made a good and lasting recovery.

E. H., æt. 17 years, had not menstruated for five months. She menstruated five weeks after taking the pills.

M. T., æt. 18 years, delicate-looking, but not an anæmic young lady, and who suffered a great deal from inordinate palpitation of the heart, had never menstruated when she came under my observation. Seven weeks after taking the pills she menstruated; did so easily and without pain; has continued to do so regularly ever since; at the present time is in excellent health.

A. C., æt. 18 years, a healthy-looking young lady, who had been studying rather hard, had not menstruated for two months. After taking 16 pills, menses returned, and she has remained regular ever since.

Mrs. G., æt. 28 years, the wife of a medical man, who suffered much from headache, great mental depression, and whose menstrual flow only sufficed to produce a small stain on the napkin, took, at my request, potassium permanganate. After taking 18 pills she menstruated, with great relief to her mental symptoms. She continues in excellent health, and is now regular both as to time and quantity.

R. M., æt. 15 years. No menses for two months; menses reappeared after taking a few permanganate pills.

S. S., æt. 24 years, extremely pale and anæmic, and who suffers from great shortness of breath on exertion, had not menstruated for one year. Various remedies had been tried. Three weeks after taking potassium permanganate she menstruated, and continued to do so regularly for several months. A relapse followed, which soon yielded after taking a few of the pills.

J. H., æt. 18 years. No menses for three months; six weeks after taking the pills she menstruated.

M. J., æt. 18 years, who began to menstruate at the age of 16 years, had not seen anything for nine months. One week after taking the pills she menstruated.

B. W., æt. 18 years, extremely pale and anæmic, had not menstruated for $1\frac{1}{2}$ years. One month after taking the pills she menstruated.

M. G., æt. 17 years, has always been rather irregular; had not menstruated for two months; did so one month after taking the pills, and what had hitherto been a painful has now become a painless process.

E. S., æt. 19 years, had not menstruated for seven months; two months after taking potassium permanganate menses reappeared.

J. R., married, æt. 35 years, had not menstruated for four months; two weeks after taking the pills she menstruated.

H. A., æt. 20 years. Been very irregular for some time past ; menses reappeared two weeks after taking the pills, and continue to come regularly.

M. I. L. had not menstruated for twelve months ; five days after taking potassium permanganate menses appeared.

B. W., æt. 19 years. Second course of treatment ; had not menstruated for six months, did so three weeks after taking the pills, and has since remained regular.

J. S., æt. 17 years. No menses for four months ; seven weeks after taking pills menstruated.

M. B., married, æt. 35 years, had not menstruated for eleven months. During this period she was the subject of pulmonary haemorrhage on several occasions. Three weeks after taking potassium permanganate she menstruated and has continued to do so regularly, with all but complete cessation of the pulmonary haemorrhage.

K. H., æt. 20 years, had not menstruated for three months ; after taking three pills menses reappeared.

M. A., æt. 18 years. No menses for three months ; two weeks after taking the pills she menstruated.

E. L., æt. 18 years, had scarcely menstruated for the last three years. Five weeks after taking the pills she menstruated, and has since remained regular.

Miss ——, the sister of a medical man, æt. 24 years, had menstruated regularly until coming into this district. Her menses had gradually diminished, and had ceased for ten weeks. After taking the pills for nearly three weeks her menses reappeared, not, however, in normal quantity, but still in a nearer approach to the normal than she had observed for months previously. Another menstrual period has not in her case yet elapsed.

E. C., æt. 21 years, single, menstruated regularly but scantily, and with great pain. Potassium permanganate has rendered the flow more profuse and perfectly painless.

E. R., æt. 41 years, married, had not menstruated for five months. Two weeks after taking permanganate pill she menstruated.

M. W., æt. 19 years, had not menstruated for four months, then very scantily, and saw nothing more for nearly ten weeks ; five days after taking the pills she menstruated—the amount and colour of the fluid passed being normal.

I have briefly given the results of the permanganate treatment in twenty-five cases, and I think you will agree with me that the results have been on the whole satisfactory. In a few other cases it failed, particularly in girls who were suffering from chlorosis, and who had never menstruated at all ; yet in some of these cases of deferred menstruation I have seen it answer well. My best results,

however, have been obtained in young girls who had menstruated for a year or two, and had then stopped ; but it has not failed in married women, aged from 30 to 35. Pregnancy, of course, has to be eliminated before administering the drug. One other good effect of the employment of manganese—and to this I would draw particular attention—is seen in cases where the menses have not altogether stopped ; the quantity has been gradually diminishing, and the act has been attended with great pain. In these the menstrual flow has been improved in quantity and quality, and pain very greatly diminished. I have noticed *this* time after time. I have not seen it do any good in amenorrhœa depending upon or rather anticipatory of phthisis pulmonalis.

Ringer recommends two or three grains to be taken thrice daily for a few days before the expected menstruation. I am in the habit of giving one grain twice daily, irrespective of the relationship to the menstrual period, and of asking the patient to continue taking the drug for weeks or months until menstruation appears—meanwhile, of course, seeing the patient as opportunity occurs. I give it in pill owing to its extremely disagreeable taste in solution—a pill composed either of ungt. resinosi or ungt. kaoli. It is absolutely necessary that the excipient should not contain any saccharine matter, such as the ordinary confections, otherwise trituration of the two is apt to give rise to a series of small explosions. I have never seen any of the bad effects usually attributed to permanganate of potassium, such as ulceration of mucous membrane, follow its employment.

On the whole, I have reason to be well satisfied with the results obtained by manganese in the treatment of amenorrhœa ; but while trusting almost solely to the use of this drug in most cases of amenorrhœa, I believe that the judicious employment of alkalies, arsenic, or iron, is a very great adjuvant, and materially aids in bringing about the good result. Yet even in those cases where such a combination has been employed, I cannot but attribute the beneficial results obtained to the administration of manganese in the form of potassium permanganate.

NOTES OF THE CONTRIBUTIONS MADE TO DISEASES
OF THE NERVOUS SYSTEM DURING THE YEAR 1885,
WITH REMARKS.

By DAVID DRUMMOND, M.D., Physician to the Newcastle-on-Tyne
Infirmary.

The number of articles contributed to this department of medicine during the year 1885 is very large; a great many subjects have been dealt with, and much that is valuable has been added to our knowledge. In the following imperfect and necessarily brief reference to the work of the year, the majority of the most important papers are alluded to, though in many cases, merely the titles are given, and not a few have escaped notice altogether.

I have divided the material into four divisions, viz.:—cerebral, spinal, peripheral, and functional.

CEREBRAL.

“Clinical Lectures on Intra Cranial Syphilis,” by Dr. McCall Anderson. *Lancet*, June 27 and July 4, 1885. These lectures are most instructive, and are well worth a careful perusal.

“On Frontal Lesions,” by Dr. Hale White. Read before the Clinical Society of London, January 9th, 1885.

In this paper the author refers to the paucity of symptoms arising from lesions in the frontal region of the brain—not even intellectual disturbances in some cases, and advances the theory that where faculties are developed late, such as the intellectual, the centres on the uninjured side are capable of undertaking the functions of the damaged portion. He further calls attention to the fact that it is not uncommon for patients suffering from cerebral tumour to die suddenly, a point of importance to which Dr. Moxon had previously alluded in the Croonian Lectures, and which he ascribes to compression of the vagus by a plexus of veins lying adjacent to it at its origin.

“Note on a Case of Aphasia in a Child, with reference to the Evolutionary Development of the Speech Centre,” by R. S. Archer, M.B. *Dub. Journ. Med. Science*, April 1, 1885.

“Case of Aphasia, in which the chief Lesion was seated in the Supra Marginal and Angular Gyri, Broca’s Convolution being unaffected,” by Dr. S. West. *Brit. Med. Journ.*, June 20, 1885.

Here we have the record of a case of granular kidney in the course of which the patient developed incomplete right hemiplegia with aphasia. At the *post-mortem*, softening of the convolutions referred to in the title was found; but it is only fair to remark that in addition the necrotic process had affected the whole surface of the Island of Reil.

"On certain cases of Disease of the Central Nervous System, in which no naked-eye changes are found at the *post-mortem* examination," by S. J. Sharkey, M.B., F.R.C.P. *Lancet*, June 6, 1885.

In this communication Dr. Sharkey supplies us with the details of the case of a young child, aged six, who died a few days after the commencement of symptoms of motor paralysis of the arms and legs, with loss of leg reflexes, and a stupid mental state. The *post-mortem* revealed nothing to the naked eye, but microscopically inflammatory changes were found in the basal ganglia and internal capsule. The author suggests that a considerable number of cases of acute nervous affections in which no *post-mortem* room diagnosis can be made, may be examples of idiopathic cerebritis. The suggestion is an important one.

"Acute Encephalitis of Children," is the subject of a communication by Strümpell in the *Jahrbuch für Kinderheilkunde*. In the majority of his cases the attack began suddenly with vomiting, fever, and convulsions; these symptoms lasting a variable period (2 or 3 days) before the development of the hemiplegia, which usually followed suddenly on a convulsion. This attack passes off rapidly, and the child is again lively except for its paralysis. The hemiplegic condition generally improves after a time, the arm recovering more slowly than the leg. The limbs become more or less rigid as a rule, and are quite unlike the flail-like condition so suggestive of infantile paralysis. Eclampsia and athetosis may become established. The lesion is inflammatory, and is situated in the cortex. In 24 cases noted by Prof. Strümpell the attack supervened in seven during the first year; in eight during the second; and in four during the third.

I have met with this condition associated with third nerve paralysis on the side opposite to the hemiplegia, an observation which is sufficient to cast doubt upon the statement that the lesion is always to be found in the cortex.

"A Contribution to the study of Cerebral Hemiplegia in Infants," by Gaudard, forms an important paper in the *Deut. Mediz. Zeit.* The following are the author's conclusions:—

(1) Onset generally sudden; patients usually under three years of age; often follows unilateral convulsions. (2) In later stage the reflexes are increased; the muscles react to faradism; the limbs are contracted; the growth of bone is interfered with. (3) The initial attack consists in meningo-encephalitis as a rule. (4) Often follows acute disease, fevers, diphtheria, etc. (5) Intellectual faculties usually unimpaired. (6) Treatment has undoubted influence over the development and prevention of contracture.

"A somewhat Anomalous Post-epileptic State," by James Oliver, M.D. *Medical Times and Gazette*, April 4, 1884. We have here a record of importance, viz., a case of epilepsy commencing in

adult life, in which a fit was followed by loss of memory of many months' duration.

"Case of Epileptiform Seizures with unusually Slow Pulse," by F. St George Mivart, F.R.C.S., *Lancet*, Jan. 3, 1885. The author records the case of an elderly man, the subject of aortic stenosis, affected with swoons or syncopal attacks (Epileptiform?) whose pulse was usually about 24 in the minute.

"Case of remarkably Slow Pulse with Epileptiform Seizure; Autopsy," by A. T. Gibbings, M.D., *Lancet*, Feb. 14, 1885. At the *post-mortem* there was nothing abnormal found with the exception of some serous fluid which occupied the right pleural cavity.

"Notes on the Treatment of Epilepsy," by Chas. K. Mills, M.D. A paper read before the Philadelphia Neurological Society, and published in the *Therapeutic Gazette*. The author treats of the medicinal treatment of idiopathic epilepsy. He has had seven cases of cure in his practice. In these cases the fits had remained away from one to three years before a cure was claimed, but I think we may fairly question whether this period is long enough. The drugs employed are as follows, and the doses mentioned were given usually three or four times a day:—

"Bromide of potassium, grs. x to 3 j; bromide of sodium, grs. x to 3 j; bromide of ammonium, grs. x to 3 ss; mono-bromide of camphor, grs. iij to vj; hydrobromic acid, f 3 ss to f 3 ss; iodide of potassium, grs. v to 3 ss; borate of sodium, grs. xv to xx; chloral hydrate, grs. x to xv; oxide of zinc and valerianate of zinc, grs. iij to x; nitrate of silver, gr. $\frac{1}{4}$ to gr. $\frac{1}{2}$; tincture of belladonna, mx to xv, or extract belladonna, gr. $\frac{1}{4}$ to gr. $\frac{1}{2}$; extract of cannabis indica, gr. $\frac{1}{8}$ to gr. $\frac{1}{4}$; fluid extract of coccus indicus, mj to iij, or tincture of coccus indicus mv to x; nitrate of potassium, grs. v to viij. Other remedies, only used in combination with some of the above drugs, are as follows:—Conium juice, f 3 j, or fluid extract, mij to x; tincture of digitalis, mv to x; sulphate of strychnine, gr. $\frac{1}{40}$ to $\frac{1}{30}$; Fowler's solution of arsenic, mij to v; fluid extract of ergot, f 3 j to f 3 ij, or extract of ergot (Squibb's) grs. iij to xj; iron, cod-liver oil, and quinine."

The bromides he regards as the best remedies, and the potassium salt he places at the head of the list; the sodium comes next, and, in his opinion, the mixed bromides are preferable to the employment of the salts singly. The following he thinks the best combination of remedies:—

R	Pot Bromid. . .	gr. xv.		Fowler's solution . . .	mii.
	Sod. do. . .	gr. xv.		Succi Conii . . .	3ss.

made up with syrup and some bitter infusion. Hydrobromic acid he thinks efficient in very large doses, but the quantity necessary often irritates the stomach. Coccus indicus did harm. He

advises the employment of the zinc salts and nitrate of silver when the bromides have to be stopped for any reason. The author highly approves of the use of counter irritation to the nape of the neck (not to the scalp) by the actual cautery, after Brown Sèquard's method.

Some interesting observations are recorded in the *Progrès Médical* (April 25, 1885) by Prof. Vulpian upon the effects produced upon visceral action by epileptic seizures. The author states that in the dog the respiratory movements and heart-beats became slower. In the same animal, and also in man, there is increase of the salivary secretion; bile is also increased, while secretion of urine is diminished or arrested. By curarizing an animal, the author could limit the epileptic attack to their effects upon the internal organs, and then the phenomena were not found to differ from those observed in the same region during ordinary attacks.

The following conclusions of Musso, who writes upon the size of the pupil in epileptics, are from the *Berliner Klin. Woch.* (1) They are not unusually dilated. (2) They are frequently unequal. (3) Occasionally the fits are preceded by inequality, which, however, subsequently disappears. (4) The pupils may act more quickly and more readily than in health, but this is not constant.

Küpper reports a case in which epileptic fits resulted from the presence of a foreign body in the ear.

"Ross on Syphilitic Epilepsy," *London Medical Record*, February, 1885. The author gives an interesting case of Bell's paralysis and unilateral epilepsy, of syphilitic origin. Referring to syphilitic epilepsy, Dr. Ross, without subscribing to the opinion of Fournier, who believes that almost all cases in which epileptic attacks begin in adult life are of syphilitic origin, advises that tentative antisyphilitic treatment be employed in cases commencing in adult life.

"A Contribution to Jacksonian Epilepsy and the Situation of the Leg Centre," by Osler, *Amer. Jour. of Medical Science*. This is the report of an interesting case in which more or less localized convulsions lasted for 14 years, with weakness and stiffness of the left leg. At the *post-mortem*, a fibrous (?) tumour was found in the ascending frontal convolution, just beneath the cortex.

"Prof. Schiff's Experiments on the Excitable Area of the Cerebral Cortex," by Wm. R. Huggard, M.D., *Lancet*, Aug. 1, 1885. This paper contains an account of some of Prof. Schiff's hitherto unpublished experiments upon the functions of the excitable area of the cerebral cortex, and these experiments are advanced in support of the Professor's view of the functions of this region, viz., that it presides over tactile sensibility and not motility. The experiments

were performed upon dogs, cats, rabbits, rats, &c., as the results on monkeys were in many respects different.

Prof. Schiff's experiments are claimed to establish the following points :—(1) That the removal of the excitable area of the cortex, or so-called motor region, permanently abolishes tactile sensibility. (2) That it does not diminish either sensibility to pain, or motor power, strictly so-called. (3) That the abolition of tactile sensibility is sufficient to account for the alteration in the animal's motility. (4) That the centres of nutrition of the fibres connecting the excitable area of the cortex with the true motor centres are in the ganglia of the posterior roots of the spinal nerves, and that the fibres in question are in physiological continuity with the posterior columns of the cord. (5) That when central tactile sensibility is abolished the so-called motor region is no longer excitable.

These propositions are supported by a series of experiments, and the whole question is summed up as follows : "The excitable area of the cortex in the dog is the area of tactile sensibility, and of this only. The evidence is as follows. (1) Ablation of the area in question permanently abolishes tactile sensibility on the opposite side ; sensibility to pain and motility being preserved. (2) The same symptoms, excluding the effects of traumatism, are produced by section of one of the posterior columns, and by removal, on the opposite side, of the excitable area for the limbs. In removing the excitable area care must be taken not to go deeper than the cortex, otherwise the true motor centres are reached. The abolition of tactile sensibility by cutting the posterior columns of the cord abolishes the excitability of the so-called motor area, when time has been allowed for degeneration of the nerve fibres. (4) When tactile sensibility is annulled by anaesthesia, the excitable area is no longer excitable, even though movements can still be excited by pain."

"Hunterian Lecture on the Mutual Relation of the Grey Masses of the Cerebro-Spinal System, and their connections with Peripheral Nerves," by Alex. Hill, M.B., M.R.C.S. The author mentions the results of Birge's experiments upon the frog, which go to establish the fact that every motor fibre in the anterior root of the cord is connected with a nerve cell immediately before its exit from the grey horn. He also alludes to the remark of Gaskell—that the number of cells in Clark's vesicular column, in any particular region, varies as the number of white *rami communicantes* (concentric fibres) derived from that region, an observation that would go to establish that this column of cells contains the primary centres of the visceral nerves. After discussing the relations of the nerves at the base of the brain to the grey matter, the lecturer enters upon the relations and functions of the corpora striata and optic thalami, and advances proof to show that the former of these

bodies, which he considers to be anatomically related to the cortex, could not act as "middle men" between the cerebral cortex and the cord. The optic thalami, on the other hand, he regards as belonging to the central grey tube.

The cortex is next discussed and the question of its possession of motor centres proper entered upon. The lecturer refers to Munk's idea—viz., that in the cortex are stored away all the sense-pictures by which our actions are accomplished. The possibility of arriving at the functions of the cortex by an appeal to comparative anatomy is discussed.

"The Successful Extraction of a Pistol Ball from the Brain," is recorded by Dr. Fluhrer in the *New York Medical Journal*, March 28, 1885. This is one of the most marvellous cases of brain surgery yet reported, and is certainly a record of great importance. It is well worth the careful consideration of surgeons, especially when viewed alongside of the celebrated case reported by Dr. Hughes Bennett and Mr. R. J. Godlee in vol. lxviii. of the *Medico-Chirurgical Transactions*—i.e., the case in which a gliomatous tumour was removed during life from the substance of the right hemisphere of the brain. The patient lived four weeks after the operation and died from a secondary surgical complication and not from any special effects produced in the nervous centres.

"Blisters in Head Symptoms produced by Cranial Lesions," by C. Handfield Jones, M.B., F.R.S.

The author advocates the repeated use of blisters in old-standing symptoms from cranial injuries, and insists upon the treatment being persevered in.

By the same writer two cases of vertigo from sunstroke are reported, in which the symptom was greatly relieved by the free administration of strychnia.

SPINAL.

"On the Diagnostic Value of the so-called 'Tendon Reflexes,'" An address introductory to a discussion, delivered before the Medical Society of London, Nov. 2nd, 1885, by W. R. Gowers, M.D., F.R.C.P. *Lancet*, Nov. 7th.

In this exceedingly able paper the author gives the results of his experience acquired since the subject of the tendon-jerk phenomenon first began to interest neurologists. After discussing the nature of the phenomenon he enters upon the practical part of the subject, and draws the following conclusions:—

- (1.) He has yet to be convinced that the knee-jerk is ever absent apart from disease.
- (2.) The presence of knee-jerk does not necessarily exclude tabes.
- (3.) The absence of the jerk is of great value in the diagnosis of diphtheritic paralysis.

(4.) Knee-jerk is lost in the later stages of pseudo-hypertrophic paralysis.

(5.) It is never absent in hysterical paraplegia, and may be increased.

(6.) He thinks true ankle-clonus very rare in hysteria.

"General Paralysis of the Insane: A Study of the Deep Reflexes, and Pathological Condition of the Spinal Cord," by William Crump Beatley, M.D. *Brain*, April, 1885.

Dr. Beatley concludes his important communication as follows :—

"So far, therefore, as my observations have gone, it would appear that in the state of the deep reflexes we have valuable indications of the state of the cord in general paralysis of the insane. They also show that disease of the spinal cord exists far more frequently than has hitherto been understood; that in some cases the morbid process may commence in the brain, and in others terminate there.

"A provisional classification can be made from the state of the deep reflexes as follows :—1st. A tabic form, in which there is posterior sclerosis of spinal cord. 2nd. The paralytic form, in which there is lateral sclerosis of the spinal cord; and 3rd. A form which is cerebral rather than cerebro-spinal, physiological tracts in the cord not being affected.

"Of the latter class, in which the reflexes are not altered, I have made *post-mortems* in eight cases. In none of these did I find a fasciculated sclerosis; the general symptoms follow more closely the classical description of the disease."

"The Treatment of Locomotor Ataxy" is the subject of an article in the *Therapeutical Gazette*. The writer refers to three cases reported by Eulenberg as cures. The first was treated by argent. nitratis; the second by the water cure and galvanism; and the third by galvanism, the application of hot water bag to the spine, and argent. nit. It is pointed out that nitrate of silver, as it is usually prescribed, can do no good, inasmuch as it forms an insoluble salt in the alimentary canal. On the other hand the subcutaneous injection of nitrate of silver is recommended— $\frac{1}{2}$ or 1 p. c. solution of the nitrate; or 1 p. c. solution of the phosphate of silver; or in the form of a solution of albuminate of silver, the latter causing least pain and irritation. This treatment, it is suggested, should be combined with the subcutaneous injection of sulphate of strychnia in 1 p. c. solution. Should the subcutaneous use of the silver salt be objected to, the nitrate may be given by the mouth, "freshly made up into pills with white clay, or on an empty stomach to be at once followed by a drink of milk." The silver is then converted into an albuminate, which is readily absorbed. It is only fair to state that Eulenberg does not claim

to have removed the sclerosis which underlies the symptoms, as in some of the so-called cures the degenerated posterior columns were found after death.

"Locomotor Ataxy without Disease of the Posterior Columns." A paper read before the Clinical Society by A. Hughes Bennett, M.D.

In this case the ataxic symptoms and signs were found to be due to the implication of the posterior roots of the lumbar and dorsal regions of the cord by a sarcomatous mass which extended up to the cervical portion. The author points out that in this case at least the impression that locomotor ataxy is due to disease of the posterior root-zones is falsified.

"Two Cases of Charcot's Disease, with Remarks on the Recent Discussion at the Clinical Society," by Chas. Atkin, F R.C.S.

We have here the record of two cases of Charcot's joint disease—evidently typical of their kind. The author then proceeds to discuss the views advanced at the Clinical Society of London some twelve months previously, and argues that the condition cannot be looked upon as the result of traumatism or rheumatic arthritis, but is spinal in origin.

"The Preataxic Period of Syphilitic Tabes," by Prof. Fournier—*Gazette des Hopitaux*.

According to this author the preataxic period may vary from a few months to ten, fifteen, or even thirty years; but in the majority of cases it extends over a period of from three to six years. Out of 211 cases the early symptoms were disorders of sensibility in 183, ocular trouble in 101, genito-urinary in 167, vertigo in 30, cerebral in 53, affections of hearing in 12, paralysis in 30, gastric or intestinal in 15, rectal in 14, laryngeal in 6, arthropathies in 2, trophic in 4. The chief cerebral symptoms were vertigo, apoplectiform and epileptiform (rare) seizures, attacks of aphasia (rare), psychical disorders (melancholia, delirium, &c.), hemiplegia, facial hemiplegia, and hemiplegia of the limbs.

The characteristics of tabetic cerebral paralysis are that they are seldom well marked, and are generally transitory.

"On Sense Perversion and Sensibility in Ataxies," by Prof. Pitres, *Jour. de Med. Bordeaux*.

Pitres has observed that patients sometimes feel as though their limbs were separated from the trunk or were attached by some foreign body. Occasionally the sensation is experienced as if the limb were attached to another portion of the body—as an arm to the side at a point below the shoulder. Subjective auditory and olfactory sensations are also mentioned, such as the ringing of bells in the ears, a persistent odour of violets, &c.

"Crises Affecting the Clitoris at the Commencement or in the Course of Tabes," by Prof. Pitres, *Les Progrés Méd.*

This author also refers to a group of cases in which sudden and unprovoked attacks of sexual excitement in the female, with voluptuous sensations about the clitoris, occurred in tabes. In one case these "crises" preceded the lancinating pains and other symptoms of the disease by four years, and in another by ten years.

Kirchoff, in the *Archiv. für Psych. und nervenkrankheiten*, discusses the localization in the human being of the ano-vesical centre in the cord, and argues that this centre is situated on a level with the origin of the third and fourth sacral nerves.

In the *Berlin Klin. Woch.*, Kernig refers to "a little known symptom of meningitis." This new symptom consists in the fact that when a patient with meningitis and dorsal stiffness is made to sit up the knees become fixed (contracture) in a flexed position, and the same sometimes occurs at the elbows. The same phenomenon would appear to take place when the thigh is flexed at the abdomen as the patient is lying on his back.

A very striking case of disseminated sclerosis is recorded by Fleury in the *Revue de Médecine* for February, 1885, in which, from the beginning to the end, volitional tremor, nystagmus, and disturbance of speech were absent. From my own experience the anomalous cases of insular sclerosis are much more common than those even approaching the text-book types.

Dr. Dyce Duckworth relates in the *Lancet*, May 16th, 1885, a case of disseminated sclerosis in a young man, aged 21, in which the lesion appeared to be hemiplegic.

"Clinical Lecture on the Treatment of Infantile Paralysis," by William Murrell, M.D., *Lancet*, December 26th, 1885. It is refreshing to meet with the following hopeful opinion enunciated by the author of this paper, though I cannot refrain from expressing the fear that the anticipation is too sanguine. "I believe (says Dr. Murrell) that in infantile paralysis a great deal may be done in the way of treatment, and that, in the majority of cases, especially in those that are seen early, a complete cure may be affected." His line of treatment is shortly as follows:—

A simple aparient is administered in the febrile stage, with light food and small doses of tinct. of aconite. Should convulsions occur bromides are recommended. When the fever has subsided a liberal diet is allowed, and the $\frac{1}{6}$ of a grain of physostigma in pill three times daily (and subsequently oftener) is given, and blisters are applied to the spine. The physostigma is employed for many months, and then phosphorus ($\frac{1}{200}$ th grain) is combined with it. Massage is also employed, and electricity as soon as the acute symptoms are over.

"Muscular Atrophy."—In a clinical lecture Prof. Charcot attempts to subdivide the group of cases whose main characteristic

is muscular atrophy. He distinguishes between the cases depending upon lesion in the spinal cord and those originating in the muscles themselves. In the first division he places amyotrophic lateral sclerosis and true progressive muscular atrophy, and in the second he includes pseudo-hypertrophic paralysis, and Erb's infantile muscular atrophy. To these he gives the title of "Progressive Myopathy."

An interesting clinical lecture by Dr. Dyce Duckworth upon "Subacute Anterior Spinal Paralysis" is published in the *Lancet*, Nov. 14, 1885.

Dr. McIntosh gives two cases of "Acute Atrophic Paralysis (poliomyelitis acuta) in the adult" which he ascribes to arsenical poisoning—*New York Medical Record*.

PERIPHERAL.

"On Some Forms of Paralysis dependent upon Peripheral Neuritis," by Thomas Buzzard, M.D., F.R.C.P. Harveian Lectures. (*Lancet*, 28th November, 1885.)

These admirable lectures are amongst the most important of the many communications made to this department of medicine during the year.

The author at the commencement makes reference to two forms of neuritis, viz., the interstitial and the parenchymatous, but withholds his opinion as to whether the latter is really inflammatory. Cases are adduced in which neuritis of one or more limbs resulted from gout, and the fact is pointed out that vaso-motor fibres are often affected as well as the motor and sensory, giving rise to œdema, and other cutaneous phenomena. The great variety in the symptoms is dealt with, and stress laid upon the absence of electrical changes in some cases marked by atrophy. Cases of multiple neuritis are then related, in which nerve after nerve (both sensory and motor) become affected, including even the cranial nerves, and it is pointed out that death may occur with signs of vagal implication. On the other hand, in many cases, absolute recovery takes place; or again, irreparable muscular atrophy may ensue.

Dr. Buzzard then proceeds to discuss alcoholic neuritis, which he deals with in a masterly way, but I feel that he does not lay sufficient stress upon the fact that women suffer so much more frequently than men; also, I am of the opinion that the author errs somewhat in regarding paralysis of the upper extremities as almost essential to the diagnosis, for I have met with several undoubted cases of alcoholic neuritis, in which the paralysis was confined to the lower extremities.

We have next the features of diphtheritic paralysis described. The pathology is discussed, and the view that the lesion is central is combatted.

An elaborate scheme of diagnosis is evolved, and the subject of prognosis alluded to, and with an ample reference to treatment is concluded this important communication.

"Case Illustrating the Symptoms and Treatment of Chronic Alcoholism as it Affects the Nervous System," by W. B. Hadden, M.D. *Lancet*, October 3rd and 10th, 1885.

"Case of Progressive Paralysis of the Ulnar Nerve Consequent Upon Injury: Operation: Successful Result," by Chauncy Puzey, M.R.C.S.

Mr. Puzey records in this paper a very interesting case; he succeeded in relieving pressure exerted by callus upon the ulnar, thrown out by a fractured bone.

"Pathology of Lead Paralysis." In a communication made to the Academy of Medicine of Ireland upon this subject, Dr. Wallace Beatty describes a lesion affecting the internal and anterior groups of the ganglionic cells of the anterior cornua of the cervical and lumbar enlargements of the cord.

In the *Medical Times and Gazette* Mr. F. W. Kirkham has a paper upon "Nephralgia due to Malarial Poisoning."

FUNCTIONAL.

"The Prechoreic Stages of Chorea," read at the annual meeting of the British Medical Association in Cardiff, by C. R. Stratton, F.R.C.S. *British Medical Journal*, September 5th, 1885.

The author describes a group of symptoms which he regards as premonitory in many cases of chorea; soreness of the nose or throat, with often a fissure at the anterior margin of the nostril, the sore yielding a micro-organism which takes aniline dye; an endocarditis with the formation of valvular vegetations, which undergo coagulative necrosis, and develop colonies of micrococci; the introduction of these products into the circulation producing capillary embolic impaction of the nerve centres, and of the parts round the joints, &c.

"An Address on Chorea," by Dr. Dyce Duckworth, delivered before the Thames Valley Branch of the British Medical Association. *British Medical Journal*, January 3rd, 1885.

The author commences with a statement of the points on which further knowledge is desired in future inquiries, and then proceeds to refer to the various views held as to the nature of the disease, and points out that the following probably represents the views of pathologists at the present day:—

1. That the disorder is associated with rheumatism in a large proportion of instances. (This is denied by Dr. Sturges and others.)
2. That, consequently, it is also associated with endocarditis, and also often co-exists with signs of heart-disease, even if this be not clearly of rheumatic origin.
3. That the latter conditions predis-

pose to the occurrence of embolisms, and certainly give rise to these in some cases. 4. That the condition of the motorial centres is one of debility and instability, however induced, whether mechanically or diathetically. 5. That, given this peculiar unstable condition, eccentric or other irritants and excitants may readily evoke the irregular modes of motion recognised as chorea."

Dr. Duckworth thinks that chorea is the outcome of a "motorial neurosis," depending upon disturbance with motor centres, probably by rheumatic or other cause of irritation. He asks whether it is not probable that there exists a peculiar basic or fundamental condition which is capable of hereditary transmission or transformation, in the subjects of which may be set up, at one time rheumatic, and at another choreic manifestations.

"Grocco on Electric Chorea or Dubini's Disease." *Annali Univ. di Med.*

The author regards this affection as an acute infective process, but denies that it is typhoid fever or a malarial affection.

"Indian Neurosis," by Dr. Chevers. *Medical Times*, January 24th, 1885.

In this important paper, which is full of useful hints bearing upon the causation and treatment of nervous affections in India, the author lays stress upon the climate, especially heat and malaria, as calculated to produce the conditions underlying neuroses. It is pointed out that it is highly dangerous for those possessing "unhealthy brains" to pass through a hot Indian season. He ascribes to excess in eating and drinking and loss of sleep a great many of the nervous troubles met with. He denies that tropical languor is necessarily a feature of Indian life, unless the nervous system be unsound. Competitive examinations as preparatory to Indian life are objected to, as weakened or enervated brains are not likely to stand the climate. The writer disapproves of free tobacco smoking, and asserts that the majority of those who kill themselves by hard drinking are epileptics. He advises that cerebral cases should not be sent to the hills, nor should they be allowed to return home by the Red Sea, but with a long sea voyage.

"Further Observations on the Cure of Writer's Cramp," by Dr. A. Wattville. *Lancet*, May 2nd, 1885.

We have here the record of two remarkably successful cases of writer's cramp, treated by Mr. Wolff, of 19, Upper Berkeley Street, London, according to his method, by a combined application of massage, gymnastics, and caligraphic exercises. In these cases the course of treatment would appear to last from twelve days to a month.

"Writer's Cramp and its Treatment," by R. P. Robins. *American Journal of the Medical Sciences*, April, 1885.

The writer regards the central nervous system as the seat of the

disease. Stress is laid upon absolute rest in treating cases of the sort, with friction, with stimulating lotions, massage, and the constant current. Faradism is to be avoided.

"On a Special Form of Numbness of the Extremities," by Robert Saundby, M.D. *Lancet*.

In this paper Dr. Saundby refers to the sensation of needles and pins in the arms or legs, which chiefly affects men and women of advanced adult life. In the author's opinion the symptom is due to stomach disorders.

"On Migraine," a Clinical Lecture, by T. Clifford Allbut. *Med. Times*, February 14th, 1885.

In this interesting communication Dr. Allbutt compares migraine with epilepsy, neuralgia, and gout, and expresses the opinion that the migrainous attack is due to sudden discharges of energy from certain nervous centres, owing to the withdrawal of or interference with inhibitory or controlling influences. This may arise out of a "growing impurity in the stomach or liver," which irritates the centres to a degree which normal higher centres can no longer inhibit. Or else the attack may be the result of some want of inhibitory power in these higher centres themselves, "so that the direct centre of centres get their own way, either by sudden release or gradual conquest." In the author's opinion such want of inhibitory power can only lie in a "defect of volume." He insists that migraine must be regarded as a neurosis, and not as "a nerve echo of a torpid liver or stomach."

For treatment Dr. Allbutt advocates guarana, given in two or three doses at short intervals, when slight warnings have been felt early in the day, as calculated to abort the attack. As remedies for permanent relief, he thinks a combination of the bromides with quinine has answered best. An absolutely regular mode of living is insisted upon. The paper is concluded with a reference to the fact that headaches often depend upon optical defects.

"On Hysteria and its Counterfeit Presentments," the Cavendish Lecture, by J. S. Bristowe, M.D., F.R.S. *Lancet*, June 13th, 1885.

This valuable communication opens with an account of two interesting cases of hysterical aphemia (loss of power of speaking, with preservation of the power of writing). Dr. Bristowe refers to a case which he brought before the Clinical Society in 1870, viz., that of a man who lost his speech, though he continued to show abundant signs of possessing a normal "supreme centre of speech," for he could understand spoken language, and could keep up a conversation in writing. The impairment in this case, which was regarded as the result of a lesion interfering with impulses passing from the highest speech centre to the peripheral apparatus, was remedied by a system of instruction in which the author taught the patient to use his organs, and first to utter the simplest

articulate sounds; and later how to combine them. The rapidity with which the patient recovered is simply marvellous. Dr. Bristowe is inclined to regard the choreic movements which developed in some of his cases as hysterical. Some cases of functional paralysis of the facial muscles are given with which ophthalmoplegia was associated, and the opinion is advanced that local paralysis may occasionally be hysterical; a very important belief, as paralysis of the facial and ocular muscles are often erroneously, I think, made the grounds for the diagnosis of organic mischief.

A more striking case still is next recorded, which, in the opinion of the author, goes to prove that stammering with *agraphia* may, in some instances, be hysterical. We may note the observation with interest, that mental phases similar to that noticed in the so-called post-epileptic state—a kind of sub-consciousness, or automatism, may be hysterical. Some of the visceral phenomena of hysteria are then considered, and Dr. Bristowe quotes a case to show that persistent vomiting of hysteria may be due to the retention of food in the œsophagus, and regurgitation from that tube.

Hysterical Dyspnœa is Described. In conclusion the author refers to the nature of the functional disorders of the nervous system, which resemble one another more particularly, viz., chorea, megrim, epilepsy, hysteria, and neuralgia, and points out how very similar they are in many of their aspects, and the difficulties attending their separate recognition, if indeed the "intermediate types" can be distinguished at all.

In the *Medical Times and Gazette* for March 21st, 1885, occurs an abstract of some lectures, by Professor Charcot, upon "The Treatment of Hysteria by Isolation."

The opinion is strongly advanced that the bromides are useless in hysteria, and especially in hystero-epilepsy—a conclusion with which, I must say, I entirely agree—and the great importance of isolation (removal from the influence of friends) is urged with all the force of Professor Charcot's experience, who lays particular stress upon the desirability of attacking hysterical conditions very early in this way.

"On the Abuse of Bromide of Potassium in the Treatment of Traumatic Neurasthenia," by Herbert W. Page, M.A., M.C.

This is a clinical lecture, and Mr. Page takes the opportunity of urging upon his hearers the necessity of giving up the very common impression that railway accidents commonly give rise to cord degenerations which end in a wide-spread meningo-myelitis. He insists that the symptoms are really due to "traumatic neurasthenia." The author speaks strongly against the indiscriminate use of bromide of potassium in the treatment of neurasthenia.

"A Case of Bilateral Athetosis," by Dr. Barrs, of Liverpool. *Medical Times*, January 31st, 1885.

Under this title the author describes an instructive case of bilateral athetosis, in which the movements on one side appeared to be spontaneous, and on the other post-hemiplegic. Dr. Barrs advances the view that primitive or spontaneous athetosis, as opposed to the post-hemiplegic form, is of functional origin, and quite independent of any organic change.

In referring to the Bowman lecture on "Ophthalmology and Diseases of the Nervous System," by Dr. Hughlings Jackson, I can only say that any brief reference to a work so profound and important would only be disappointing. The lecture will be found in the *Lancet* of November 21st, 1885.

PATHOLOGICAL STATEMENT OF THE NEWCASTLE-UPON-TYNE INFIRMARY FOR THE YEAR ENDING JANUARY 25TH, 1886.

BY DAVID DRUMMOND, M.D., Pathologist.

During the past twelve months eighty-eight *post-mortem* examinations have been made, the largest number reported since the department has been under my direction. The following list of the *post-mortem* diagnoses will convey an idea of the varied character of the examinations :—

1. General paralysis.
2. Acute peritonitis, with old-standing bladder disease and surgical kidneys.
3. Congenital syphilitic cirrhosis of the liver.
4. Aortic regurgitation.
5. Aortic regurgitation, with syphilitic disease of the liver.
6. Carcinoma uteri.
7. General tuberculosis.
8. Syphilis, parenchymatous nephritis.
9. Acquired syphilitic cirrhosis of the liver.
10. Croupous pneumonia.
11. Scirrhus of the rectum with perforation of the bowel.
12. Pulmonary and peritoneal tuberculosis.
13. Mitral and tricuspid regurgitation, with cirrhosis of the kidney and liver.
14. Chronic and acute peritonitis—operation for ovariotomy.
15. Acute peritonitis, with perforation of the intestine—operation for left inguinal hernia.
16. Hypertrophic cirrhosis of the liver.
17. Calculus of the right kidney—perinephritic suppuration.
18. Pyæmia—disease of the pelvic bones with suppuration.
19. Traumatic cerebritis—compound fracture of the skull.

20. Granular kidney—pneumonia.
21. Aortic and mitral regurgitation.
22. Granular kidney.
23. Acute peritonitis—abdominal exploratory operation.
24. Pyloric cancer.
25. Pulmonary and intestinal tuberculosis.
26. Fracture of the skull—laceration of the brain.
27. Pulmonary phthisis.
28. Pulmonary phthisis and amyloid liver.
29. Chronic parenchymatous nephritis.
30. Addison's disease—pulmonary tuberculosis.
31. Cerebral glioma and chronic pleurisy.
32. Intra-thoracic tumour.
33. Croupous pneumonia.
34. Granular kidney.
35. Pulmonary phthisis.
36. Pulmonary phthisis.
37. Acute intestinal obstruction from internal hernia.
38. Tetanus.
39. œdema of the glottis—malignant disease of the tonsil.
40. Carcinoma of the prostate.
41. Pulmonary phthisis—pneumo-thorax.
42. Malignant disease of the liver.
43. Malignant disease of the rectum.
44. Malignant disease of the colon.
45. Mitral stenosis—pulmonary apoplexy.
46. Chronic pericarditis and pleurisy.
47. Peritonitis—enteritis.
48. Chronic empyema—amyloid kidneys and liver.
49. Pulmonary phthisis.
50. Compound fracture of the humerus—fatty degeneration of the liver.
51. Tubercular peritonitis.
52. Colloid cancer of the stomach.
53. Pericardial effusion—chronic cystitis.

54. Fracture of the skull—purulent meningitis.
55. Lumbar abscess—amputation at left hip-joint.
56. Aortic and mitral regurgitation.
57. Aneurism of the ascending portion of the thoracic arch.
58. Mitral stenosis—hepatic and renal cirrhosis.
59. Granular kidney.
60. Osteo-sarcoma of the right innominate bone—villous tumour of the bladder—surgical kidney.
61. Laryngeal and pulmonary phthisis.
62. Chronic interstitial nephritis with amyloid degeneration.
63. Mitral stenosis—granular kidney.
64. Acute peritonitis—operation for pyo-salpinx.
65. Obstruction of the rectum, the result of old-standing peritonitis.
66. Mitral and tricuspid regurgitation, granular kidney.
67. Uterine myoma—peritonitis.
68. Pott's disease of the cervical vertebræ; pachymeningitis; compression of the medulla by the odontoid process.
69. Aortic aneurism — granular kidney — poisoning by putrid lobster.
70. Acute inflammation and necrosis of the stomach and œsophagus (sulphuric acid poisoning).
71. Chronic tubercular peritonitis.
72. Acute hepatitis (phosphorous poisoning).
73. Pleurisy with effusion—aortic regurgitation.
74. Mitral and tricuspid regurgitation—pneumonia.
75. Pyæmia—pleuro-pneumonia—pus in the left knee-joint.
76. Acute peritonitis—ovariotomy.
77. Pulmonary and intestinal tuberculosis.
78. Cylindroma of the upper end of the colon and cæcum—obstruction.
79. Aneurism of the left side of the ascending portion of the arch of the aorta.
80. Splenic leucocythaemia.
81. Cancer of the cardiac orifice of the stomach and œsophagus.

- 82. Typhlitis with perityphlitic abscess ; pyæmic abscesses in the liver.
- 83. Atheroma of the cerebral arteries—œdema of the brain.
- 84. Adherent pericardium—mitral regurgitation.
- 85. Pulmonary phthisis—necrosis of the acetabulum.
- 86. Pulmonary phthisis.
- 87. Stricture of the urethra—prostatic abscess, cystitis, surgical kidney.
- 88. Chronic hydrocephalus.

In the course of these examinations, the following morbid conditions of interest were met with :—

I.—CIRCULATORY SYSTEM.

- a. Aortic aneurism, 3 (two succulated, one fusiform).
- b. Aortic atheroma, 15.
- c. Aortic dilatation, 1.
- d. Aortic regurgitation, 9.
- e. Coronary atheroma, 1.
- f. Cardiac hypertrophy, 11.
- g. Cardiac dilatation, 6.
- h. Mitral stenosis, 3.
- i. Mitral regurgitation, 12.
- j. Pericardial adhesions, 5.
- k. Pericardial effusion, 5 (four serous and one purulent).
- l. Pericarditis acute, 1.
- m. Pulmonary regurgitation, 2.
- n. Myocarditis, 1.
- o. Tricuspid regurgitation, 7.

II.—RESPIRATORY SYSTEM.

- a. Bronchitis, 2.
- b. Bronchiectasis, 1.
- c. Empyema, 1.
- d. Emphysema of lung, 11.
- e. Congestion of the lungs, 9.

- f.* Oedema of the lungs, 26.
- g.* Pulmonary infarct, 6.
- h.* Pulmonary tuberculosis, 18.
- i.* Pneumonia, croupous, 6 (grey stage 4, red hepatization 2).
- j.* Pleurisy, acute, 10 (1 the result of infarct, bloody effusion 2).
- k.* Pleurisy, chronic, 37.
- l.* Thickened pleura, 1.
- m.* Pleural effusion, 16 (hydrothorax 6, inflammatory 10).
- n.* Pneumothorax, 2.
- o.* Secondary malignant deposit in lungs, 1.
- p.* Do. do. mediastinal glands, 1.
- q.* Thrombosis of the branches of the pulmonary artery in case of pyæmia, 1.
- r.* Syphilitic erosion of the nasal cartilages.
- s.* Tuberclse of the larynx, 1.
- t.* Tumour of the anterior mediastinum, 1.

III.—DIGESTIVE SYSTEM.

A.—STOMACH, INTESTINES, ETC.

- a.* Atrophy of the stomach, 1.
- b.* Dilatation of the stomach, 4.
- c.* Gastritis, 1.
- d.* Cancer of the stomach, 3.
- e.* Acute inflammation and necrosis of the mucous membrane of the stomach and œsophagus, 1.
- f.* Cancer of the colon, 2.
- g.* Cancer of the rectum, 2 (1 with perforation of the bowel).
- h.* Ulceration of the cœcum and colon, 3.
- i.* Tubercular ulceration of the small intestine, 8.
- j.* Perforation of the intestine, 2.
- k.* Obstruction of the rectum from old-standing pelvic peritonitis, 1.
- l.* Obstruction of the bowel (small intestine) from internal hernia—a portion of the small intestine had become adherent to an inflamed lumbar gland, forming an opening into which a knuckle of intestine has passed.

m. Strangulated inguinal hernia, adherent at the ring; bowel opened by operation.

B.—LIVER.

- a.* Angioma of the liver, 1.
- b.* Atrophy of the liver, 1.
- c.* Cirrhosis (congenital syphilitic), 1.
- d.* Do. (acquired syphilitic), 1.
- e.* Do. (common alcoholic), 3.
- f.* Amyloid degeneration, 3.
- g.* Hypertrophic cirrhosis, 1.
- h.* Fatty degeneration, 17.
- i.* Acute hepatitis, 1.
- j.* Abscess (pyæmic), 1.
- k.* Nutmeg liver, 14.
- l.* Perihepatitis, 9.
- m.* Tubercular liver, 3.
- n.* Contracted cystic duct, 1.
- o.* Gall stones, 3.
- p.* Secondary malignant deposit in the liver, 2.
- q.* Primary hepatic sarcoma, 1.

IV.—NERVOUS SYSTEM.

- a.* Cerebritis, 1.
- b.* Cerebral œdema, with atheroma of the arteries at the base, 1.
- c.* Cerebral laceration and meningeal haemorrhage, 1.
- d.* Chronic hydrocephalus—enormously dilated ventricles, 1.
- e.* External hydrocephalus, 1.
- f.* Brain of a general paralytic, 1.
- g.* Traumatic purulent meningitis, 1.
- h.* Compression of the medulla by the odontoid process—laceration of the transverse ligament, 1.
- i.* External pachymeningitis of the cervical region of the cord, 1.

V.—URINARY SYSTEM.

- a.* Acute renal congestion, 1.

- b. Chronic renal congestion, 5.
- c. Surgical kidney, 4.
- d. Amyloid kidney, 5.
- e. Chronic parenchymatous nephritis, 4.
- f. Cirrhosis of the kidney, 10.
- g. Floating kidney, 2.
- h. Tubercular kidney, 2.
- i. Atrophy of the right kidney, with congenital occlusion of the ureter, 1.
- j. Chronic cystitis, 4.
- k. Villous tumour of the bladder, 1.
- l. Senile hypertrophy of the prostate, 1.
- m. Prostatic abscess, 1.
- n. Prostatic cancer, 1.
- o. Stricture of the urethra, 2.

VI.—UTERUS AND OVARIES

- a. Carcinoma uteri, 1.
- b. Large uterine myoma, 1.
- c. Lateral flexion of the uterus, 1.
- d. Marked retroflexion of the uterus, 1.
- e. Parametritis and pelvic peritonitis, 4.
- f. Cystic ovaries, 1.
- g. Chronic ovaritis, 1.

VII.—MISCELLANEOUS.

- a. Acute peritonitis, 9.
- b. Chronic peritonitis, 6.
- c. Tubercular peritonitis, 3.
- d. Secondary deposit in the peritoneum, 1.
- e. Tubercular spleen, 1.
- f. Amyloid degeneration of the spleen, 3.
- g. Tubercular disease of the supra-renal capsules, 2.
- h. Pigmentation of Addison's disease, 1.

- i. Chronic congestion of the spleen, 4.
- j. Sarcomatous tumour of the spleen, 1.
- k. Fracture of the skull, 2.
- l. Compound fracture of the skull, 1.
- m. Abscess compressing the larynx, 1.
- n. Perforating sarcoma of the cranial bones, 1.
- o. Abscess connected with disease of the pelvic bones, 1.
- p. Osteo-sarcoma of the right innominate bone, 1.
- q. Compound fracture of the humerus, 1.
- r. Spleen of leucocythaemia, 1.
- s. Pus in left knee-joint (pyæmia), 1.
- t. Perityphilitic abscess, 1.
- u. Necrosis of the acetabulum, 2 (perforation, 1).

In seventeen cases the liver was found to be fatty. This condition was met with in seven out of the twelve instances in which the *post mortem* diagnosis was pulmonary phthisis. Of the remaining five phthisical cases, the liver was lardaceous in one; in another the organ was too much decomposed to admit of any diagnosis; whilst in a third it was nutmeggy, and in two cases alone it was normal.

It is interesting to note the bearing of traumatism upon fatty liver. This form of degeneration was present in two cases of fracture of the skull—one of compound fracture of the humerus (No. 50), one in which the breast had been amputated but no union obtained (59)—and one in which abdominal section had been performed. Case 50 is exceedingly striking in this connection: The body was that of a boy, aged about two years, who had been run over by a tramcar and had his right humerus fractured. At the *post-mortem* (which was made several days after the accident) the only disease discovered, independent of the compound fracture, was a most marked fatty liver. The organ seemed to be almost entirely transformed into fat, and microscopical sections stained with osmic acid turned jet black.

The enormously hypertrophied heart recorded in autopsy 56 is

worthy of note—the organ weighed 45oz. In this case the valvular lesion was combined aortic and mitral regurgitation. Another point of interest in connection with cardiac disease is illustrated by No. 74. The body was that of a woman of large, powerful frame, aged about 35; the right ventricle was found greatly dilated, the tricuspid orifice admitting five fingers readily. The condition appeared to be simple dilatation from chronic alcoholism—the patient had been a very heavy spirit drinker; there was no liver or kidney cirrhosis. In two out of the three cases of mitral stenosis the kidneys were granular, and in both the variety of Bright's disease was the large cirrhotic form. In the two cases of saccular aneurism of the thoracic arch the points at which the tumour bulged through the chest wall were unusual. In case 57, the sac eroded the third and fourth ribs from one to two inches to the right of the right nipple. Thus the aneurism encroached on the chest wall much below the usual position occupied by a sac springing from the ascending part of the aorta. In case 79, the sac sprung from the left side of the arch, just above the valves, and also bulged below the third rib, though on the left side of the sternum.

Two well-marked examples of wandering or floating kidney were met with; in each case both kidneys could be displaced very easily from their bed, as they were held *in situ* by very loose peritoneal attachments. In one a distinct meso-nephron was found. Of the ten instances of granular kidney, five only were below the normal weight; of the remaining five four were apparently examples of the combined form of parenchymatous and interstitial nephritis; whilst one, a beautiful specimen, was primarily lardaceous with secondary cirrhotic changes.

The number of cases in which old pleurisy was found is remarkable. In no less than thirty-seven autopsies there were distinct signs of a former pleuritic attack.

In conclusion, I have to thank my colleague Dr. Limont for his valuable aid in the *post-mortem* room throughout the year, and

especially for his kindness in undertaking the direction of the department when, for some six or seven weeks, I was unable to attend, owing to illness.

To Dr. Waldy, the house physician, I am deeply indebted, for it is to his zeal and tact in obtaining permission from the friends the large increase in our *post-mortem* examinations is due.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

SESSION 1885-86.

MARCH MEETING.

THE SIXTH MONTHLY MEETING of the Society was held in the Library of the Newcastle-on-Tyne Infirmary, on the evening of Thursday, March 11th—Dr. Fielden (President) in the chair.

The PRESIDENT reminded members that nominations of office-bearers of the Society for the Session 1886-87 were due at this meeting, and the following gentlemen were duly nominated :—

President—G. H. Hume, M.D.

Vice-Presidents (4)—S. Fielden, M.D.; David Drummond, M.D.; Wm. Gowans, Esq.; James Murphy, M.D.

Hon. Secretaries (2)—James D. Farquharson, M.B.; Jas. Limont, M.B.; Thomas Oliver, M.D.

Committee (9)—W. C. Arnison, M.D.; James Adamson, M.D.; B. Barkus, M.D.; W. Lyon, M.D.; J. W. McDowall, M.D.; G. B. Morgan, Esq.; J. R. Morison, M.D.; G. H. Philipson, M.D.; F. Page, Esq.; T. C. Squance, M.D.; G. E. Williamson, Esq.

OLD-STANDING INJURY OF KNEE JOINT.

Dr. MURPHY: I bring before you here a man suffering from what I have described as an old injury of the knee joint. Nine years ago this man, who was at that time a sailor, was pulling off a large sea-boot, the one leg being thrown over the other. While pulling off the boot, he avers that he felt something snap; and, though he was not at once incapacitated—indeed, for some time he performed all his duties, including going aloft—the leg gradually became so bad that he had to quit the sea, and for some time past he has only been able to do work of the lightest character. On examination, I find both bones of the left leg dislocated completely backwards; and the point upon which I should like the opinion of the members is one of treatment. What treatment would be best here? Excision would, in my opinion, be unjustifiable; and the question is, would the man not be better off with a wooden leg?

Dr. OLIVER: I have examined this case carefully, and I have come to the conclusion that the condition is not one of traumatic dislocation of the knee; but, from the condition of the pupils and the total absence of knee jerk, I think there cannot be any doubt that this is a case of tabes with Charcot's joint disease. I would therefore propose that we postpone the discussion of this case until I have submitted the case of tabes which I have here to-night.

CASE OF TABES WITH CHARCOT'S JOINT DISEASE.

Dr. OLIVER: The case which I bring before you gains in interest when taken in conjunction with the one just shown by Dr. Murphy. This case is, in my opinion, undoubtedly one of tabes with Charcot's joint disease. This patient first came under observation in 1881, when she was admitted into this Infirmary under the care of Dr. Arnison. She is a charwoman, fifty years of age. Some time in 1881, while kneeling at her work, she felt a pain in her knee. This pain was followed by considerable swelling of the joint, and shortly afterwards she came into the Infirmary. It was found, though much swollen, that there was great mobility of the joint; but the condition at the root of the phenomena was not at that time recognised, and, after being kept in for some time, the woman was discharged, wearing a light splint. She subsequently resumed her employment as charwoman, and kept at it till September of last year. In that month the symptoms which had troubled her four years ago recurred, and a few weeks ago she again became an inmate of this institution. You will notice that the knee is very much swollen, and that the patella is drawn outwards. The heads of the tibia and fibula are dislocated backwards and outwards; yet, with all this deformity of the joint, there is great mobility, and one can move it about in any way desired. I do not think that this is a case of arthritis, but rather that it is a dislocation of a specific character arising from some lesion in the cord. There is no knee jerk, and, though the pupils respond to stimuli, the reaction is not well marked. We have not at all in this woman anything of the nature of inco-ordination of movement. A charwoman in a fair state of health, and following her ordinary employment, does not put such a strain upon her knee as to cause its dislocation. And another circumstance, too, which excluded the opinion that we had here a surgical disease of the joint was, on the one hand, the great amount of swelling, and, on the other, the marked degree of mobility unaccompanied by pain.

Dr. DRUMMOND: I think the man exhibited by Dr. Murphy is, without doubt, the subject of tabes, with Charcot's joint disease. The point of interest in these cases is their pathology and the relation between the accident to which reference has been made

and the result. As regards the pathology, I agree with Buzzard that the lesion is not in the cord but in the medulla. The gastric crisis met with almost always points to a lesion in the bulb, and it is a point worthy of note that in these cases there is very rarely marked inco-ordination. I would say that the accident, so frequently associated with the appearance of the deformity, is really its cause. You have the joint undergoing a slow process of disintegration, and a condition is reached when a very slight cause may produce the dislocation.

SARCOMA OF THE POPLITEAL NERVE.

Dr. HUME: I bring this patient under your notice to exhibit the comparatively trifling loss of function in the limb following the excision of three inches in length of the popliteal nerve, which was the seat of a sarcomatous growth. You will observe that there remains very considerable sensibility in the limb below the knee; and, considering that my patient is just out of his bed, he walks with very little halt indeed. He can extend the foot, and this I account for on the ground that the nerve has been divided below the giving off of the small twigs which arise higher up and go into each horn of the gastro-cnenius.

This is the tumour, about the size of a walnut, and it is a small-celled sarcoma. You will notice there are several haemorrhages into its substance, and there are only a few sarcomatous cells lying along the expanded fibrils of the nerves. The tumour, I take it, was a very rapidly-growing one and easily broke down, allowing of haemorrhages into its substance. I think that many of the growths described as blood cysts are of the very same nature as this one. They are rapidly-growing malignant tumours of the nerves, and may be pulsating, and from their position be confounded with aneurisms.

CASE OF ALCOHOLIC PARAPLEGIA.

Dr. DRUMMOND: This patient is a married woman, aged 36, and the mother of five children. Her hasband was formerly a publican, and she acquired marked habits of intemperance. For the past few months her memory has been failing, and during the month of December, 1885, she began to experience pains in her feet and legs, more especially when she walked. Before long she had to complain that her legs were weak and numb, and her gait rather unsteady. When admitted into the Infirmary (on the 28th of January, 1886), her lower extremities were very helpless and emaciated, and her memory was considerably impaired—so much so that she had forgotten the fact that she had consumed a large quantity of spirit and beer during the past few years. She lay with the legs extended, and could only flex and extend them in a

very feeble way. The condition of ankle-drop (feet extended at the ankles) was very marked ; she had quite lost the power of flexing the ankle. The muscles were very much wasted and soft, especially those of the calf and the flexors of the foot. The plantar reflex and knee jerk were absent. Sensibility was considerably impaired—areas of analgesia and anaesthesia were scattered over the skin of the lower extremities. The paralysed muscles and feet were exceedingly tender when squeezed. There were no bed sores, and little or no interference with the bladder or rectal functions. The extensors of the fingers were slightly weakened, but otherwise the upper extremities were unimpaired. The paralysed muscles showed a greatly diminished faradic contractility.

The features of the case I regard as distinctive of peripheral neuritis, and particularly the extended ankles, the tender wasted muscles, with the loss of electrical excitability, the loss of the reflexes, the absence of bed sores and vesical paralysis, the sensory disturbances, and the loss of memory ; the latter being, in my opinion, a special feature of the alcoholic variety.

CASE OF BRACHIAL PARAPLEGIA.

Dr. DRUMMOND: This young woman, aged 18, first came under my notice on the 9th of June, 1885, when she was suffering from paralysis and rigidity of the fingers of both hands. She stated that she had cut the top of the middle finger of the left hand in January, 1884. The wound suppurred, and instead of having it incised, it was treated by a chemist, who applied caustic. Two months after the injury the finger contracted, and soon the ring finger became likewise flexed. Four or five months later the index and little fingers also contracted, and the fingers of the right hand became weak. In December, 1884, the surgeon in charge of the case amputated the finger, which had been injured, at the metacarpo-phalangeal articulation. Shortly afterwards the fingers of the right hand became firmly flexed, and the thumb of the left hand also contracted. She was now practically helpless, and when first admitted into the Infirmary (June, 1885) the fingers of both hands were firmly clenched and the extensors completely paralysed. The flexors were also very much affected, though not quite powerless. The extensor muscles on the back of the forearm were distinctly atrophied and the faradic contractility abolished ; this was particularly well marked on the left side. The flexors of the fingers, though weak and somewhat reduced in bulk, reacted normally to the interrupted current. She complained almost constantly of a pain along the course of the left radial nerve. The patient was placed under chloroform, and the fingers of both hands were extended and put upon splints for a short time. Massage (muscle rubbing) with faradism were extensively employed, and the patient was directed

to practice a number of exercises with her fingers. Before long we had the satisfaction of witnessing the return of the electrical excitability, with an increase in the bulk of the affected muscles and a considerable improvement in motor power. Unfortunately our patient got scarlet fever in September, when so many cases occurred in the wards of the hospital, and, of course, had to be sent away. She was lost sight of until the commencement of February of the present year, when she was again admitted into the Infirmary. She was then in much the same condition as at present, viz., the fingers of the left hand are once more contracted and powerless, but the improvement that had taken place has, to a certain extent, continued in the case of the right hand. Indeed, the left hand is practically just as it was when she was first seen last June. Now, as then, the scar where the finger was amputated is exceedingly tender, so much so that she cannot bear to have it touched. In my opinion the lesion is a peripheral neuritis, and I think it fair to assume that the irritation started from the injured finger. The question arises, has the lesion travelled across the cord and affected the fibres leaving the corresponding cornu, or was the lesion of the posterior interosseous of the right arm in no sense continuous with that of the left arm?

CASE OF ELEPHANTIASIS ARABUM.

Dr. DRUMMOND: This man, a sailor, aged 46, a native of the island of Nevis, in the West Indies, is, in my opinion, suffering from elephantiasis arabum or Bardadoes leg. The patient first observed the swelling in the leg (right) when he was 16 years of age, but it had scarcely inconvenienced him at all until about six months ago, when the swelling became much more pronounced, and a yellow discharge exuded from the surface. About the same time, the scrotum became swollen, and now was to be seen as an enlargement about the size of a cocoa nut. This was obviously a hydrocele, but the fluid contained granular matter like lymph. No filaria have, so far, been discovered in the blood.

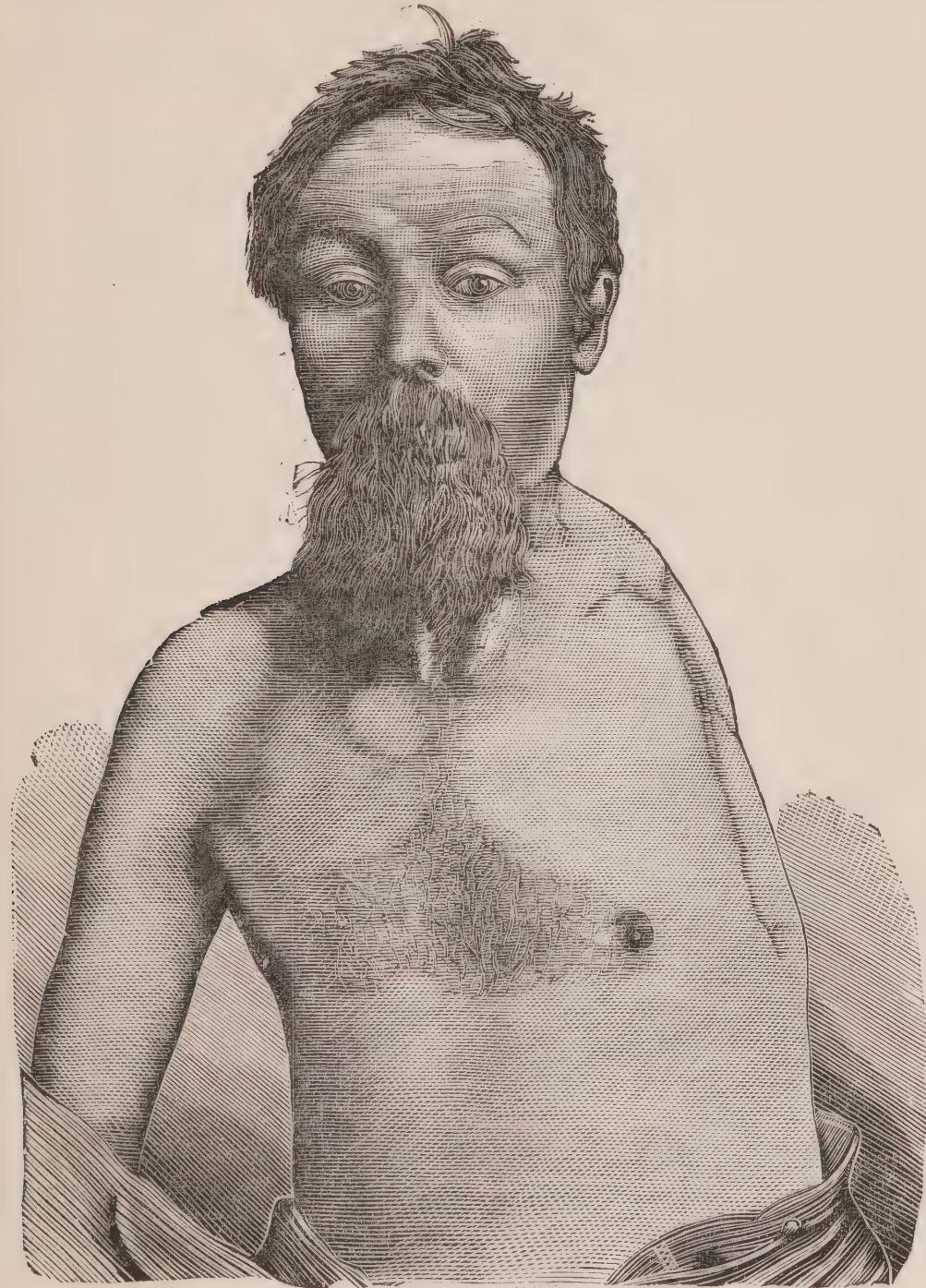
SARCOMA OF THE SCAPULA.

Dr. MURPHY: Mr. President, I very much regret the absence of my colleague, Mr. E. Allan Maling, and that he is not here to describe to you more fully than I can this very interesting and successful case. But in his absence I show you here the entire upper extremity, the whole of the spacula, and about one-third of the clavicle (from which, on January the 22nd, Mr. Allan Maling removed the remaining portion) of a man whom I exhibited at an earlier portion of the evening. Mr. Allan Maling has supplied me with the following notes:—

"T. Kendray, æt. 50, was admitted into the Sunderland Infirmary, on December 11th, for a tumour of the left shoulder. Twelve months previously he had noticed a small swelling on the left shoulder blade, which had gradually increased in size up to the date of his admission. Until a short time before this he had been following his employment, but the increasing size of the tumour and the pain consequent on the swelling, caused him to seek relief at the Infirmary. He is a tall, spare, but not unhealthy-looking man. Says that he always had good health. He now complains of pain and weight of the shoulder, with inability to raise the arm. On examining the tumour it was found to be situated on the dorsum of the scapula, below the spine, extending along its inner border into the axillary space. There was considerable fluctuation felt over nearly the whole tumour, the skin over it being tense and of a dark purple colour. As there was some doubt as to the exact nature of the tumour and its contents, it was tapped with a trochar, and about eight ounces of dark bloody fluid drawn off, leaving a hard mass at the upper and inner portion of the tumour about the size of an orange, which spread into the upper portion of the axilla, involving the shoulder joint. In the course of three or four days the tumour had filled up again, and was as hard and as tense as before. Microscopic examination of the fluid showed the presence of sarcomatous cells. Having shown the case to my colleagues, they agreed with me that it was a case of sarcomatous tumour, and that as the shoulder joint was involved in the disease, the only treatment to be of any benefit was the removal of the whole of the scapula, together with the upper limb, which operation was performed on January 22nd, 1886."

On January 22nd, Dr. Allan Maling performed Lund's operation as follows:—He made an incision along the superior surface of the clavicle from nearly its centre to the acromion; he then cleared the bone very carefully, and passed a broad flat director beneath it, and sawed the bone across at the junction of the middle and outer third, the broad director completely protecting the vessels beneath; he then made a somewhat curved incision in front, in the direction of the axilla, so as to reach the subclavian artery, and in doing so cut across the acromio-thoracic artery, which was at once seized by Koerberle's forceps, and both ends then secured. By this incision, the loose portion of clavicle being somewhat raised, he divided the sub-clavius, the attachments of the lesser pectoral to the coracoid, and the fibres of the larger pectoral muscle. The weight of the shoulder drew the two portions of the clavicle apart, and between them a ligature was passed round the subclavian artery; but, before the ligature was tightened, an Esmarch's bandage was applied to the arm from the fingers to the shoulder, so that every

possible drop of blood might be saved; and then the ligature was tightened, and another placed about an inch below it, and the artery divided between them. The vein was then treated in a similar manner. He then made an incision from the centre of the



first backwards over the top of the shoulder, dividing sufficient structures to bring into view the edge of the trapezius muscle and about two inches of its surface. The skin being reflected, the

trapezius was cut across, and the transverse cervical, and posterior scapular arteries secured, also their companion veins, and some smaller arteries. He then divided the latissimus dorsi muscle; and, drawing the scapula away from the ribs, he divided the thin margin of the serratus magnus, the rhomboids, and levator anguli. The last incision was then made—a vertical one—following the line of the internal third of the scapula, and sweeping forward into the axilla.

The operation, it is needless to say, was carried out with strict Listerian precautions, and so skilfully was it performed that not more than two or three ounces of blood were lost, and all was completed within an hour. The patient rallied well from the operation, and I need not detain you with a history of the case, since, as it has progressed most favourably, and you have had an opportunity of judging for yourselves what excellent health and spirits the man is in to-night. I may mention that Mr. Lund, Professor of Surgery at Owen's College, Manchester, exhibited a very similar case on which he had successfully operated at the Cambridge meeting of the British Medical Association in 1880, and Dr. Maling's operation was carried out on the lines designed then by Mr. Lund, who has been most courteous in giving suggestions for the case; and I am sure you and the members will join me in most heartily congratulating Dr. Maling on the complete success of his bold and formidable operation. The woodcut is from a photograph taken seven months after operation.

Dr. FIELDEN : I remember a case of a somewhat similar nature, upon which Dr. Heath operated. In Dr. Heath's case, if I remember rightly, the tumour was an enchondroma.

Dr. HEATH : I showed that case to the members of the British Medical Association at the annual meeting. There was, however, a great difference in the result of my case and Dr. Maling's, for I am sorry to say I lost my patient.

CASE OF CONGENITAL ABSENCE OF ONE KIDNEY.

Dr. MURPHY : This very rare and interesting case occurred in the practice of Dr. Coatsworth Watson, who has kindly supplied the following notes:—

"The child of Mrs. Simpson died suddenly in a fit of convulsions, probably from improper feeding. She had been fed on arrowroot biscuits from birth, and died when 14 days old. The mother contracted syphilis seven years ago; has had other 10 children, 9 dying under three months.

"*Post Mortem*: The child weighed 5lbs., was small, and had the appearance of starvation. There was no kidney or ureter on the left side. The uterus was rounded and smooth on the left side,

and had no ovary or fallopian tube on that side. On the right side there were the usual appendages. The right kidney weighed 4 drachms, and allowing the proportion of kidney to the body to be 1 in 240 (Quain), it would be large enough to do the duty of two kidneys for the weight of the body. There has probably been an absence of the Wolffian body on the left side."

CYSTIC SARCOMA OF THE TESTICLES.

Dr. MURPHY: The specimen which I now show you is a very perfect example of cystic sarcoma of the testicle, which I removed three weeks ago from a young man, aged 22. Some twelve months ago he noticed that his left testicle was much larger than its fellow, but quite painless; that it continued to increase in size till it became about the size of a hen's egg, when he consulted a surgeon, who strapped it. As this had no effect, he consulted another, and eventually came to me. I kept him under observation for some time; and having satisfied myself that it was a case where excision gave the only prospect for relief, told him so, but he objected, and determined to seek what he termed "further advice," but he fared worse. He next went to a naval pensioner, who makes a speciality of these diseases, but even in the required three days he was no better, but had his scrotum severely blistered. Many other practitioners did he consult, till one surgeon, more enterprising than the rest, plunged a trocar into the tumour, which had the effect of sending the patient back to me prepared to submit to excision, which I accordingly performed, and the wound is now almost healed. I am indebted to my friend Dr. Squance for this very beautiful and accurate drawing, which very faithfully represents the tumour when cut open immediately after removal; also for this microscopical drawing and the two slides, which are under the microscopes. He has also kindly supplied me with the following report on the specimen:—

"The tumour weighed 1lb. 1oz., and when laid open measured $5\frac{1}{2}$ inches by 4 inches. Before being washed, it presented the appearance depicted in the accompanying drawing, the surface generally being studded with very small translucent cysts, with larger ones interspersed. Some of the cysts contained a clear watery fluid, and others a gelatinous one. *Microscopic appearance:*—Under a low power a section of the tumour was seen to consist almost entirely of cysts, varying in size, and surrounded by fibrous tissue denser in some places than others. When more highly magnified, the cysts were seen in many cases to be lined with a delicate hyaline membrane, studded with small cells, almost exactly resembling those found in the vesicles of a hydatidiform mole. In some of the cysts villous projections into the interior were noticed. On the confines the growth was much softer, consisting of small

round and spindle-shaped cells. The pearl-like bodies were of two kinds, soft and hard. The former contained fatty debris and granules, fibre cells, and cells resembling seminal epithelial cells; while the hard ones contained what appeared to be ill-developed cartilage—large cornified cells without nuclei, fragments of seminal tubes, fatty and molecular matter, and pigment. There were no spermatozoa."

The disease is not a very common one, and the disease appears within the tunica albuginea, which is generally thinned. The cysts in this case are smaller than usual, most of them being about the size of pearl barley, but a few are the size of large peas, and they are very numerous, and some are filled with coagula. They are imbedded in a dense fibrous tissue. This is the "hydatid disease of the testicle" of Astley Cooper, who supposed that the cysts were formed of enlarged and obstructed tubuli seminiferi. Curling takes a different view; and, from the examination of a case in which the seminal tubes terminated in a dilated pouch, and where also he found lateral dilatation in the tubes, he concluded that its seat may be traced to the ducts up the *rete testis*.

P.S.—A few days after the March meeting my attendance ceased, but about the middle of April I was again requested to see the patient, and found an abdominal tumour reaching almost to the umbilicus, in which I could distinctly feel fluid. He rapidly lost flesh, and in May the tumour was enormous. He measured fifty-six inches round the umbilicus, his legs were markedly oedematous, and his chest and arms almost like those of a skeleton. I tapped the large cyst in the anterior part of tumour, and removed forty-three pints of dark, grumous-looking fluid. A fortnight afterwards, on June the 9th, he died, and at the *post-mortem* examination I found the cyst had refilled, and a large sarcomatous tumour occupied almost the whole abdomen, firmly adherent to pelvis and abdominal walls, and including in its growth, omentum, mesentery, intestines, liver, stomach—in fact the whole abdominal contents were more or less implicated.

UTERINE MYOMA.

Mr. BLACK: This tumour which I show was spontaneously expelled from the uterus of a patient 38 years of age, shortly after her confinement. It is an intra mural tumour; and the point of interest about it is, that the woman, though the mother of six children, never had a symptom in the intervals of her pregnancies.

Dr. GIBSON: How does Mr. Black know that this is an intra mural growth?

Mr. BLACK: If Dr. Gibson will examine it, he will find a perfectly distinct capsule.

ADENOMA OF THE BREAST.

Mr. PAGE: This specimen was removed from the left breast of a young woman aged 29 years. It consists of a considerable portion of the mammary gland, and upon the surface of the gland will be seen a morbid growth about the size of a sparrow's egg, which is encapsulated and embedded in the mammary gland. It had been noticed some nine months, and gave rise to pain and considerable mental anxiety. I considered it prudent to remove a considerable portion of the gland, to cut away freely surrounding tissue, looking upon the growth as a simple adenoid tumour. Dr. Limont has kindly examined some sections microscopically, and tells me that it is an adenoma. The relation between adenoma, sarcoma, and carcinoma seems to me to be so intimate clinically, all of them having a tendency more or less strong to return, that I am rapidly coming to the conclusion, when one has to deal with a solid tumour of the female breast, if any operative procedure is adopted, it is safer and better in the first instance to remove the entire gland.

MELANOTIC SARCOMA OF THE EYE.

Mr. PAGE: This eyeball was removed lately from a man aged 72 years. Twenty years ago patient had a severe attack of inflammation, which impaired the sight of his left eye. Three years after he suffered great pain in the same eye, and quite suddenly lost all sight in it. Six weeks ago he noticed a small lump under the upper lid at the inner angle of the eye. This lump increased rapidly, so that the orbit was occupied (on admission to this Infirmary) by a tumour which distended and protruded from between the lids, and was as large as a small hen's egg. The eyeball was pushed to the inner side of the orbit, and the stretched and tense conjunctiva seemed upon the point of bursting. On section of the disorganized eyeball a thick plate of bone was cut through and the tumour was found to consist of material to the naked eye closely resembling old blood-clot. This matter seems to have escaped from the eyeball by rupturing the sheath of the optic nerve. It has since been examined microscopically by Dr. Limont, who pronounced it to be melanotic sarcoma. On the supposition that the disease was malignant the whole contents of the orbit were removed at the time of operation. Dr. Limont has kindly prepared some sections, which show the histology of the growth remarkably well, and which are very characteristic.

GROUP OF UTERINE CASES.

Dr. LIMONT: Case I. The patient from whom this ovarian tumour was removed was aged 26. She was admitted under my care complaining of swelling of the abdomen of one year's duration.

Previous to its appearance menstruation was normal, with the exception of somewhat severe pain during the day before the commencement of the flow. When the swelling appeared, menstruation stopped, and did not reappear for 7 months ; since then it has been regular, and the amount has been considerably more than her normal. The patient when admitted was considerably emaciated, and had the ovarian facial expression well marked. The abdomen was uniformly distended. It was dull over the hypogastric and lumbar, and resonant over the umbilical and epigastric regions. On placing the patient on her side the fluid changed its position, but not freely. There was a well-marked fluid wave. By "dipping" the fingers the fluid could be displaced and a tumour felt in the hypogastrium. Nothing was to be heard on auscultation. Per vaginam the cervix was felt low down. Per rectum broad bands could be felt passing apparently from the sacrum on to the tumour. The case was diagnosed as one of ovarian tumour, complicated with fluid (probably inflammatory) in the peritoneal cavity. I regret that Mr. Page, who operated on this and the succeeding cases, is not present to describe the operations. When the peritoneal cavity was opened 3 pints 10 ounces of fluid were removed. It was glary, yellow, turbid, of a specific gravity of 1025, and contained a number of white particles which looked like flakes of lymph. Under the microscope one found red blood corpuscles, leucocytes, and the so-called ovarian cells. The white particles consisted not of lymph, but of aggregations of the ovarian cells, and as far as I could see there were no signs of peritonitis. The tumour after the removal of the fluid was found to consist of one large cyst above and a number of smaller ones below ; the large one had given way, and this explained the presence of fluid in the peritoneal cavity. The lower part of the tumour lay between the folds of the broad ligament, and was separated by tearing off the peritoneum, which was done with little difficulty. It was, however, not at all easy to secure the bleeding points. The tumour, after emptying the largest cyst, weighed two pounds. The patient rallied well from the operation, but died suddenly the next day. Liberty could not be obtained to make a *post mortem* examination. The cysts, as you see, show solid masses projecting into them. These masses, some of which are as big as a hen's egg, are composed of papillæ projecting inwards from the wall ; from the primary papillæ secondary ones project, and some of them unite so as to form secondary daughter cysts. The papillæ are composed of fibro cellular material covered by columnar epithelium. The tumour therefore appears to be a specimen of the papillary form of probiferous cyst.

Case II.—This tumour was removed by Mr. Page from a woman, I. G., aged 51, who was sent to hospital by Dr. Purdie with the diagnosis of ovarian tumour.

Patient's menstrual history had been fairly normal. She had one child when 30, and two abortions shortly afterwards. Was regular till 39, then had slight and irregular losses till the commencement of present illness, when menstruation ceased altogether.

Patient's first complaint, about a year ago, was pain in the hypogastrium—sometimes very sharp and cutting. The swelling was noticed only three or four months ago, being probably hidden till then by the stoutness of the patient. She had performed severe work all her life, and continued to do so to within a few days of her admission.

When admitted, the abdomen was uniformly distended up to the ensiform cartilage and the edge of the ribs. The skin showed purple distension marks and enlarged veins. There was dulness all over the front of the tumour, resonance over the ascending and descending colon. There was fluctuation and a well-marked fluid wave in the region of the umbilicus, no wave over the rest of the tumour. At the sides, the tumour felt rough and irregular, but no solid material could be made out. The anterior abdominal wall was non-adherent to the tumour. The abdomen measured, at the umbilicus, 45 inches; two inches above it, 46 inches; two inches below it, 44 inches. The vagina was elongated, and the cervix so far back and high up that it could just be reached, and nothing else was to be felt.

In removing the tumour, Mr. Page had to extend his original incision up to the umbilicus. A very large number of cysts had to have their fibrous walls incised by knife, and their contents scraped out by the hand. After diminishing the size of the tumour in this way, it was found that there were on the posterior surface very extensive and very firm adhesions, and that in the pelvis the tumour was adherent to uterus and bladder. With great difficulty the adhesions were separated, the vessels tied, and a drainage tube was inserted into pelvis.

Soon after the operation the pulse became quick, the temperature rose, the patient became extremely restless, and died with all the symptoms of peritonitis on the third day.

The fluid removed from the tumour was of the usual description; it deposited a copious white sediment, which consisted of masses of the so-called ovarian cells and of masses of cholesterin.

The tumour, as you see, has, in removal, lost all its original appearance. All that is left is the fibrous part of the cyst walls, which is very thick and tough. On examination under the microscope, however, I have been able to find parts covered by columnar epithelium, and having papillæ covered with the same epithelium projecting into the cavity. Its nature, therefore, is the same as the preceding one.

Case III.—This ovarian tumour, when removed by Mr. Page,

presented a most peculiar appearance, parts of it being of a dead white, and parts of a chocolate colour. The cysts were all filled with a thick, dark red, bloody material.

As you see, a great part of its mass has been formed by a thin-walled cyst. There are several smaller ones, and one of these, which is cut across, appears quite solid, its contents looking like very firm blood clot. Under the microscope there is a section showing the structure of the wall. You will see layers of fibrous tissue, between which is a large quantity of blood. Running through the fibrous tissue are a number of large thin-walled blood vessels. The inner surface of the cyst appears to be quite smooth, and to present no projections like the two other tumours.

The patient made a rapid and uninterrupted recovery.

Case IV.—These tubes and ovaries were removed from a patient, E. B., aged 37, who was admitted under my care on the 11th December, complaining chiefly of pain in the right ovarian region, and leucorrhœa of several years' duration.

Menstruation began at the age of 12, was regular, lasted a week, and the amount lost was great. There was dysmenorrhœa during the first day of the flow, often so bad as to keep her in bed.

When 21 she had her first child; the labour was long, and the placenta, she states, was retained, and had to be removed by the introduction of the hand into the uterus. This was followed by a prolonged and severe attack of "inflammation." It was three years before she again became pregnant; she then had four successive abortions, all about the second month. The last of these occurred ten years ago. She has never been pregnant since, but got a separation from her husband seven years ago.

For the last few years she has suffered from back pain, bearing down pains, painful defæcation, painful and frequent micturition, leucorrhœa (with from time to time a sudden discharge of "matter with a bad smell"), very profuse menorrhagia and metrorrhagia. Dysmenorrhœa was also very severe, commencing three days before, and being relieved on the second day of the menstrual flow.

As a result of these troubles, she has become unable to support herself by her labours as a dressmaker, and has spent a considerable part of her time in bed.

Owing to tenderness a satisfactory examination could only be made under chloroform. I then found the uterus anteflexed, enlarged, but freely moveable; the left ovary the size of a walnut, low down, and fixed; the right the same size as left, but high up, and freely moveable. Behind the uterus was felt a soft body, apparently a coil of small intestine fixed in pelvis.

Mr. Page agreed with me that the patient was suffering from disease of tubes and ovaries, and as the patient was rendered unfit to support herself, and lived a miserable life, and palliative treat-

ment had had no good effect, we recommended her to undergo an operation for their removal. She willingly consented, and Mr. Page operated on January 3rd. The incision, three inches in length, began immediately above the pubis. The right ovary and tube were easily drawn up to the wound, ligatured and removed ; but the left one was adherent to the floor of the pelvis, and firm adhesions had to be separated before it could be raised and ligatured.

On the right side the fimbriæ of the tube had disappeared, and the distended end of the tube was quite closed, while the remainder of it was considerably distended. This body it was that before operation felt like a coil of intestine. The ovary was about double its normal size, had a large cyst in its substance, and a calcareous nodule projecting from its surface, and was adherent to the closed end of the tube. On the left side the tube and ovary are in the same condition as the right ; but they are not adherent to each other. The fluid in the tubes was dark in colour, and showed under the microscope red blood corpuscles, large white corpuscles with fatty spots, large yellow granular corpuscles, oil globules, and debris.

Patient, a week after the operation, had an attack of cellulitis on the right side, which went on to suppuration, and was discharged by the line of incision opening. After this, however, she rapidly regained strength, and left hospital in very fair condition about the beginning of March. It is now about nine weeks since the operation. She has lost all her old pain, the leucorrhœa has almost disappeared, and she has not yet menstruated. Formerly she had severe haemorrhage every two or three weeks.

P.S.—This patient has lost all pain, leucorrhœa, and pelvic trouble. She has never menstruated since the operation. Her general health is quite restored, and she is now performing the by-woman's light duties of a probationer in a large hospital.

CASE V.—These tubes and ovaries were removed by Mr. Page from a patient whom I first saw about a month ago in consultation. I then diagnosed enlargement of the ovaries, with dilated tube, and advised removal of them. She accordingly was admitted on 23rd February under my care, and afterwards transferred to Mr. Page.

The patient is 30 years old, and her chief complaint was pain in the left ovarian region, which incapacitated her from performing her household duties, and which had troubled her for about five years.

Before marriage her menstrual discharge was very scanty, and preceded by severe pain for one day. Has had four children. The pregnancies, labours, and puerperia seem to have been normal. The last child was born about a year ago.

When admitted, patient was considerably emaciated. She com-

plained of gnawing pain in the left ovarian region, which was subject to frequent exacerbations, and was intensified on going up steps. There was a continual and profuse leucorrhœa, with an offensive smell. She had menstruated twice since the birth of the last child, and on these two occasions the quantity had been much greater than she had ever lost before. She had suffered from frequency of micturition and severe dyspareunia for several years. For about a year she had been unable to look after her house, and spent most of her time in bed or sitting by the fire.

On vaginal examination, there was felt, lying to the right, and behind the uterus, a body about the length and thickness of one's thumb—soft, and giving one the sensation of being the fallopian tube. Uterus is slightly enlarged, not tender. The resistance in the left ovarian region prevented its being explored by the bimanual method; but, on abdominal palpation, Mr. Page discovered the enlarged ovary. With the patient under chloroform, these points were confirmed. The left ovary was high up, movable, and about the size of a pigeon's egg.

The operation was performed on the 6th of March. The incision was made low down, as in the last case. The left ovary and tube were easily brought to the surface, and removed. The ovary contains, as you see, a cyst about two inches by one-and-a-half. The remains of the ovarian structure lie at the hilus. There are several minute broad ligament cysts. The right ovary and tube were also easily removed: the former was longer and broader than normal, but flat, and several small cysts project from its surface. Attached to the broad ligament by a pedicle was a small cyst. Running out from the right cornu of the uterus, in front of and partly continuous with the broad ligament, is a fleshy-looking flap, which passes outwards for some distance, and ends in the broad ligament in front of the hilus of the ovary. It was evidently this body, and the broad flat ovary, which before operation simulated a considerable dilatation of the tube. The tubes and broad ligaments were markedly congested. The tubes were also slightly dilated, the dilatation not being uniform, but consisting of saccules separated by contractions. Water injected from the fimbriated end passed freely through. On compressing the other end, and injecting, the tubes easily dilated; the dilatations and constrictions becoming more marked; and finally, when fully distended, the tubes coiled up and took a corkscrew shape. When thus distended, a number of inflammatory thickenings of peritoneum could be seen running along the tubes, and apparently producing the modified shape.

It is now five days since the operation. The patient is very well, and has lost all her old pain and discharge.

Dr. HUME: I show a large multilocular ovarian tumour, removed from a woman aged 61. The tumour was interesting on account of its great size. It had also been interesting diagnostically. There had been noticed on the front of the tumour a limited area with clear percussion. It was found that this was due to adherent bowel. Strong adhesions to the omentum and bowel—the latter so intimate that a portion of the cyst wall had to be left attached—were the only adhesions. The patient recovered well.

I also show a small, true, parovarian cyst of the size of a duck's egg, removed on account of the pain it was causing. It lay in Douglas' pouch, and could be moved from side to side. There was one portion of it specially tender when touched, and this proved to be the remains of the ovary. The tumour consisted of one cyst growing from the ovarian hilum, and separating the folds of the broad ligament. At the farther end of the cyst from the ovary was a warty (papillamatous) ring of cartilaginous hardness. The patient, a young woman, recovered well.

Dr. HEATH: The fibro-cystic growth which I now hand to you was removed about four weeks ago. Shrinking has taken place since the removal, by contraction and in consequence of the incision into the tumour and of the evacuation of the cyst. The solid portion of the tumour is a fibro-myoma; the cyst has probably formed by vasnotation; there are two or three small cavities towards the edge of the solid growth, where apparently similar cysts are in process of formation. The tumour grew from the right cornu of the uterus by a short pedicle continuous with the structure of the uterine wall, and about an inch and a quarter in diameter. There was a small cyst, as large as a walnut sessile, on the base of the uterus which was not interfered with; the appendages of the uterus being, at the suggestion of Dr. Oliver, removed. These are sent round with the tumour. There are several particulars of interest in this case, both as regards diagnosis and also the operative procedure, which I hope fully to speak of at some other time. At present I propose to add to the description of the tumour already given merely the statement that the patient is now nearly well.

Perhaps, sir, you will also now allow me to show, as a recent specimen, this somewhat ragged-looking ovarian tumour, removed the day before yesterday from a lady aged 62. The growth consists of one large and several smaller cysts, with almost solid contents. The ragged appearance arises in part from the numerous and very close adhesions which existed between the growth and the surrounding parts, especially the rectum, broad ligament, and the peritoneal line of the pelvis. The large cyst, before removal, rose nearly to the ribs, whilst the smaller growths were wedged into the pelvis, pressing on the front wall of the rectum, to which the adhesions

were very close, displacing the uterus, from which it was very difficult to distinguish the solid masses of the tumour, and indirectly affecting the neck of the bladder so as to interfere with the passage of urine. As in the previous case, there are several points of considerable interest, diagnostically and also surgically, which I hope to have another opportunity of speaking upon. I will only now mention one circumstance which occurred after the patient was placed upon the operating table, and which was almost the most remarkable occurrence I ever witnessed at an operation. The patient, as I say, was upon the table, the tumour had been felt and examined by Dr. Mackay, and two other gentlemen present, and by myself. Its position, fluctuation, and other physical signs noted, the patient was almost completely under chloroform, and the operation about to begin, when Dr. Mackay, whose hand was lightly laid upon the belly, suddenly exclaimed—"the tumour has disappeared," and so indeed on examination we found was the case. The circumscribed tense tumour was gone ; in its place was a loose flaccid belly. The physical signs, too, were altogether changed. At the front of the belly, where there had been a dull stroke-sound and fluctuation, there was an air-stroke sound and no fluctuation ; whilst at the flanks, which had been sonorous, there was now dulness and fluctuation. Evidently the cyst had ruptured and the fluid contents, now loose in the peritoneal cavity, had come under the influence of gravitation and had disposed themselves accordingly. We thought best to continue the operation, and after opening the belly, after a little search the cyst was found lying in the pelvis, contracted, empty, and with the slit in which I now put my finger in its front surface.

Dr. OLIVER: The patient from whom Dr. Heath removed the fibro-cystic tumour of the uterus first consulted me in July of last year for a swelling of the abdomen. She looked in good health ; and, beyond the inconvenience caused by the weight of the abdominal tumour, suffered in no special way. A year before that, however, she had an acute attack of pain in the lower part of the abdomen, accompanied by vomiting. This lasted a few days, but afterwards entirely disappeared, and she thought little of the matter until December, 1884, when she felt a hard lump, about the size of an orange, in the lower part of the abdomen. It was circumscribed, and painless on pressure. When I saw her in July—that is, six months after she noticed the lump—the tumour had grown considerably. It extended almost up to the umbilicus, was more or less rounded in shape, and was extremely resistant to the hand. Her menses were normal. At times she had experienced a difficulty in micturating, but none with her stools. No souffle was heard over the tumour on auscultation. Per vaginam the cervix was found to be extremely small, os small, and looking for-

ward. Behind and in front of the cervix could be felt a hard, unyielding mass. The sound passed with very great difficulty, but only to the extent of one inch. It could not be said that the uterus moved apart from the tumour. I had the pleasure of having, soon after this, Dr. Heath's opinion in the case; and, although there was great difficulty in regard to a diagnosis—most of the physical signs pointing to a uterine tumour—we were both agreed as to the advisability of abdominal section being performed, and removal of the growth if practicable. Dr. Heath and I were quite prepared to meet with extensive and firm adhesions in the pelvis. Patient deferred having the operation performed until the early part of February. She had at this time not menstruated for two months. When the abdomen was opened, as Dr. Heath has told you, and a large cyst was brought into view, we all imagined that we had an ovarian cystoma to deal with; but, on further bringing the tumour into view, a large outgrowth from the uterus was seen to be connected with the cyst. We had, therefore, a fibro-cyst of the uterus to deal with, the solid portion of which—as large as a cocoa-nut—was firmly incorporated with the wall of the uterus on the one hand, and adjacent organs on the other. Its removal was a matter of great difficulty, and the haemorrhage which resulted was so great, that it was for this reason I suggested to Drs. Heath and Newcombe the advisability of removing both ovaries (the patient was 40 years of age) than of again cutting the uterine wall to remove another myoma which was present. For several days patient's condition was very critical; but now she is all right, after one of the most serious abdominal operations I have seen, and in which the uterus had to be incised. On microscopical examination the growth is found to be fibro myoma-cystis.

In regard to the second case, which I had the honour of seeing, with Drs. Heath and Mackay, we had, as far as the results of an examination per vaginam was concerned, almost an identical condition to that met with in the first case. There was the same resistance, and the same occupation of the space in front of and behind the uterus by solid material. Examined by the abdomen, however, it was clear that we had to do with, at least, one very large cyst, whose walls were thin and whose contents very fluid. In this case there was no doubt about the diagnosis of ovarian cystoma—solid and adherent, particularly in the pelvis towards the rectum, and one large monocystic tumour in the abdomen. Dr. Heath has alluded to the rupture of the cyst while the patient was just about to be operated upon. There was a very slight struggle as the patient was passing under the influence of the anaesthetic, and at this juncture Dr. Mackay felt something give way under his hand placed upon the abdomen. The tumour proved to be one of the nature, and with all the pelvic adhesions

of the former case. The lady, whose age was 61, was much reduced owing to frequent vomiting, which had lasted several weeks, and required very careful watching during the administration of the anaesthetics.

Dr. NEWCOMBE: Dr. Heath's first case is one of the most interesting cases of abdominal tumour I have seen, more especially on account of the dubious character of the diagnosis. I do not think it was possible to differentiate the origin of the tumour before operation. My opinion certainly inclined to it being a uterine fibro-cystic rather than ovarian. Indeed so much doubt existed, that Dr. Heath was prepared for any contingency should the necessity arise of removing the uterus. However, the tumour was not so incorporated with the uterus, although the area of contact was large, as to require this, and it was thought that the removal of the appendages would prevent a renewal of the growth, without performing the more formidable operation. I beg to congratulate Dr. Heath on the success of this very interesting and instructive case.

GROWTH OF THE FUNDUS OF THE EYE.

Dr. HEATH: The patient whom I ought to have shown to-night, but who, unfortunately, has not been able to attend, presents several features of interest to those engaged in ophthalmic work. He is a young man, 19 years of age, and exhibits in the fundus of the eye, just above the yellow spot (examined by direct method), a swelling about 3 mm. in length, 2 mm. in breadth, and standing up from the surface about $1\frac{1}{2}$ mm. The sight in the affected eye is somewhat dimmer than on the other side, and he has also double vision. I think that his is a case of a glioma at a very early stage, or it may be a cysticercus. This patient also exhibits the ovality of the disc, which for years I have maintained to be one of the signs of astigmatism. Of late years, I notice that the condition has been more widely recognised, and one or two of the new text-books on ophthalmic surgery refer to it. It is interesting that in this case the ovality is vertical in direction, and in the majority of cases this is the direction in which the ovality is found. It is curious to notice how, in some books, it is said that the optic disc is sometimes oval and not always round. I think this is owing to the greater convexity of the vertical meridian of the cornea. The first time this condition came prominently before me was in a railway case, a good many years ago. The man had been injured in a railway accident, and complained, among other things, of some optical disturbance. I was asked to see him, and found this ovality of the disc accompanied with indistinct vision. I did not attribute the oval shape of the disc to the accident, but looked upon it as a sign of astigmatism, which

previous to the injury had been covered by the accommodation, but which had become manifest when the accommodation had been weakened temporarily by the concussion caused by the injury. Two other medical witnesses from London took a different view. One, who was for the railway company, thought there was nothing at all amiss with the eye; the other, who was for the plaintiff, was of opinion that the retina was affected as the result of spinal injury. I am satisfied, however, that the view stated above was correct. In cases of concussion the accommodation is frequently affected, and sometimes continues weak for a considerable period after the accident, so that if the patient suffers from any error of refraction, such as hypertropia or astigmatism, which had previously been rectified or covered by the accommodation, this error becomes manifest, and continues to give trouble until the accommodation is restored or suitable glasses provided.

LEUKÆMIA.

By CHAS. GIBSON, M.D., Consulting Physician to the
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Human life, like all organic life, is inseparable from and indeed characterised by change. The most complex tissues are the aggregations of simpler ones ; and “the life of a man is the sum of the life changes of the minutest particles of his organism.” Organic structures demand nutriment everlasting, in a ratio proportioned to the activity of their vital functions. The blood of man is the element of structural nutriment at once demanded in the vital changes and competent to supply that demand. And in the items of causation in disease, its perversions play a principal part. This precious circulating fluid stands as an intermediate between the direct products of digestion, and the material factors in assimilation—the supplier of organs and parts with materials for nutrition and the carrier of effete matters from them. It is the flowing living mass upon which organs of secretion and excretion equally operate, and the influential force everywhere operative in the production of vital manifestations.

The blood has a life history of its own, and, like other creatures, it has its periods of growth, maturity, and decay. The physiological conditions which determine and regulate its production or development are not accurately known, and exceedingly few facts have been established capable of satisfying the investigator in this important and deeply interesting field of biological enquiry. It is not the purpose of this paper to enter upon the consideration of obscure problems of embryonic life, but it may be observed in passing that the blood cells of the embryo are multiplied by a process of division, and that it is highly probable, if not a demonstrated fact, that when the liver is being formed in the development of the embryo, the multiplication of blood cells in the whole mass of the blood ceases, and that the new blood cells are produced by the liver, first colourless and nucleated, but afterwards acquiring the blood tint ; these cells, like the first cells, being multiplied by division. After birth, the nucleated lymph or chyle corpuscles must be regarded as the progenitors of the white blood corpuscles. “Lymph,” says Foster, “is blood minus its red corpuscles.” The development of red blood cells from the corpuscles of lymph and chyle, by whatever agency and however indirectly, continues thence throughout life.

The spleen has been more generally credited with a blood producing and blood changing power than any other organ in the body

The character of the blood carried to it by the splenic artery, and from it by the splenic vein, and the loaded condition of the viscus itself with blood cells of differing quality, and the changes which it undergoes in disease, appear to justify the belief that its life work is largely that of a haematopoietic organ. Then the remarkable researches of Bizzozero, and those of more recent observers, afford evidence to the effect that the marrow of bones is intimately concerned in the development and life changes of blood. Herein may be found not only blood leucocytes but its cellular constituents in their progressive changes up to perfect red globules. The liver, as has already pointed out, plays an important part in "the blood genesis of the embryo," and in later periods of life it is regarded as an organ largely concerned in the production of normal blood changes, the splenic, gastric, and mesenteric veins carrying blood to its vena portæ. The lymphatics have long been regarded as haematopoietic and effect largely the transfer of material absolutely necessary to the maintenance, life, and health of the blood. Indeed Virchow (who announced his discovery of leukæmia at or about the same time with Bennett in 1845) and a host of others have regarded leukæmia under two aspects only, viz., as lymphatic and splenic, recognising the lymphatic glands and the spleen as chief, if not only factors in the metamorphoses of blood elements.

The thymus and the thyroid (ductless and vascular glands like the spleen) have also been credited with blood producing or blood modifying power, while it has generally been recognised that leucocytes are persistently evolved in the cell growth of connective, as of adenoid, tissue, and that their life history is ended in the birth of red corpuscles. The structural peculiarities of those cells seem to point to the facility with which transmutation may be effected; the white corpuscle being a mass of protoplasm, nucleated and without limitary envelope, while the matured healthy red corpuscle is a well-defined cell without a nucleus.

Leukæmia is a chronic progressive disease which has for its essential characteristic the presence in the blood of an abnormal number of white blood corpuscles. These white cells, according to Kindfleisch, resemble in every particular the corpuscular elements of embryonic tissue, and of pus, from which they can hardly be distinguished by any anatomical criteria. In normal blood it may be reckoned that ordinarily the white cells, in comparison with red ones, exist in the proportion of 1 to 335 (Moleschoff's estimate), but in leukæmia they have frequently been found in the proportion of 1 in 10, and sometimes the white cells equal the red cells in number, and exceed them in bulk, and deposits have frequently been found where the red cells have not been seen at all. Probably any departure from the normal proportion of white cells to red,

where the former are remarkably numerous during prolonged periods of time, may justify the use of the word leukæmia. In well-marked cases of the disease, however, the proportion of white to red corpuscles is at least 1 to 20 ; this is the standard which is accepted by Troussseau. But the conclusion is irresistible that often the disease will have been long in existence before this proportion shall have been arrived at.

In leukæmia, the various parts and organs before referred to undergo characteristic changes, but the blood alone proclaims absolutely the existence or non-existence of this terribly fatal disease. Here let it be observed that leukocytosis frequently exists when the body is not otherwise appreciably diseased. It is present during menstruation almost invariably, but disappears with the catamenial change. It is a common condition in utero-gestation. Nay, it may be said to be developed after every full meal, while, in prolonged fasting, only one white corpuscle may be found to eight or ten hundred red ones in healthy blood, and it is remarkable that after a very large reduction of red corpuscles by haemorrhage or disease (anaemia) the normal proportion of cellular constituents of the blood may be regained in a very short space of time. Then leukocytosis results, as it were, incidentally, from certain forms of diseased action—fevers, as typhus and those of the puerperal state; inflammations, especially when accompanied by suppuration. In a case of iliac abscess, referred to in a discussion reported in the *British Medical Journal* for January 16th, 1886, the number of white corpuscles to red was very large (1 to 101) before the opening of the abscess, but the proportion immediately fell to 1 in 383 after it was opened. In this case a marked increase of white corpuscles was observed before any distinct evidence of abscess formation was manifested. At the same discussion it was affirmed that “pints of pus are sometimes absorbed.” In chlorosis leukocytosis might be looked for—anticipated, and it has been sometimes observed ; frequently, however, no peculiarity in this direction has been found during the whole course of the chlorotic disease. In certain chronic diseases (when they have advanced far), as mesenteric and pulmonary consumption. In carcinomatous diseases—diseases (to which, indeed, leukæmia bears a great and startling resemblance), the same remarkable superabundance of white cells is observed in the blood. In Addison’s disease—a chronic scrofulous inflammation of the supra-renal capsules—leukæmia is sometimes found, and yet the malady may pass on to the bitter end without leukæmia once showing itself. In disease of other ductless glands, as the thymus and the thyroid, leukocytosis is not unfrequently observed, but quite as often disease will reign in these organs for lengthened periods without any superabundance of leucocytes showing itself. In certain diseased conditions of lym-

phatic glands the occurrence of leucocytosis might almost be predicted, and it is certainly sometimes present, but it is frequently absent, although the diseased conditions have been of most varied duration and force. And these fitful relationships are still more remarkable in Hodgkin's disease—adenia or lymphadenoma—wherein the lymphatic glands are characteristically enlarged, and usually with enlargement of liver or spleen, or both. But Hodgkin's disease—really in close kinship with leukæmia—may exist for an indefinite period without developing any remarkable change in the relative proportions of the cellular constituents of the blood, such as hold in leukæmia. For example, the case reported by Dr. Wood : a man, æt 30, suffered severely from camp diarrhæa or dysentery. He was afterwards taken with a dragging, heavy pain in the back and left side. He rapidly lost flesh and became exceedingly feeble; the abdomen became large, showing an enormous spleen and a very large liver. He soon died, and the *post mortem* examination showed, in addition to the enlarged spleen and liver, great increase in the size of the lymphatics of the abdomen, thorax, and axilla. But there was no leucocytosis observed during the whole course of the disease.

The disease is manifested by subjective and objective signs. Briefly, the subjective signs are : languor and debility, dull pains about the abdomen, headache, giddiness, noises in the ears, and palpitation. The objective signs are : pallor, feeble pulse, emaciation, dyspncea, intumescence of skin, enlarged lymphatic glands, and nervous prostration. It may be said to have two stages—the first antecedent to the manifestation of specific cachexia, and the second when this cachexia has been pronounced. In the former the diagnosis is not always easy; but the peculiar conditions under which the leucocytosis has been developed, and the effects of remedial treatment, will generally be sufficient for correct diagnosis. In the latter case little difficulty will be encountered.

The poor, the ill-fed, the badly lodged, and the drunken are those mostly affected by leukæmia. Digestion is generally performed well even in the later periods of the disease. At the very last, diarrhæa often occurs, and a tendency to haemorrhage is frequently observed.

The necropsy of fatal cases of leukæmia first and characteristically shows the diseased condition of the blood: the excessive number of white corpuscles, the diminished number of red corpuscles, the pale colour of the blood, its thin watery consistence, and its infirm coagulum. The spleen is commonly found enormously enlarged, firm, pale, and tough; scrapings from its cut surfaces showing numerous white and coloured corpuscles. The malpighian bodies—which are, indeed, masses of adenoid tissue connected with branches of the splenic artery, and which ensheathe its minuter

ramifications—are somewhat enlarged, giving sometimes, with the pale lines of trabeculae, a mottled character to the section; the usual appearance of the spleen, in fact, with coarser markings. Embolic infarctions are found in wedge-shaped masses, often yellow coloured from blood degeneration. The splenic pulp and sinuses are loaded and distended with leucocytes. Still, the tissue of the spleen is not, for the most part, discoverably diseased, although its creamy purplish blood is regarded by some pathologists as characteristic. The liver is almost always enlarged—often very greatly enlarged, pale, and firm, its section commonly showing a distinctly anaemic character. Its capillaries are crowded with leucocytes, which, also, have exuded into the spaces surrounding the vessels. The lymphatic glands are commonly found in a hypertrophied condition; due, probably, as in the spleen and liver, to vascular engorgement. Individual glands are sometimes very large, and occasionally almost every gland of the body appears to be affected. The bony marrow is very often diseased.

The interesting results of the researches of Bizzozero upon the bony marrow have already been referred to in connection with normal blood changes, but these are transcended in interest by the remarkable discoveries of Neumann, which led this pathologist to regard the bony marrow as the chief factor in the blood changes appertaining to leukæmia. These morbid conditions were observed in the cavities of long bones, the cancellated structure of the ribs, sternum, and vertebræ; the microscope showing cellular elements in great abundance of the same nature as those occurring in leukæmic blood. He noted also a complete absence of the normal vascular network, in the meshes of which the cell masses are commonly embedded. The only vessels found were arterial branches, the walls of which were often infiltrated with leucocytes, while outside the vessels the number of red cells was very small as compared to that of colourless corpuscles. In a case of Mosler's the medullary tissue of the lumbar vertebræ, of the femur, and of other bones, was degenerated, and the medullary vessels in other places were *filled* with white blood corpuscles.

Without denying the accuracy of the observations which have from time to time been made on the anatomy, the physiology, and the pathology of the blood, it must be admitted that these subjects are far from being clear, defined, and complete; and that the purpose and the achievements of almost every investigator of the pathology and etiology of leukæmia have been the establishment of some special organs as seats of the disease—centres from which all its morbid effects have issued.

But what are the facts? The ductless glands can hardly be necessary to life—at least, in the adult. The thymus soon wastes and disappears; the suprarenal capsules are degenerate organs; the

thyroid is affected by diseases some of which destroy its normal structure without manifest signs of bodily illness ; the spleen has often been removed in animals and in man without evident ill consequences—the lymphatics and bony marrow, according to Mayer and Neumann, taking on compensatory action. Again, leukæmia is observable in the course of many forms of disease ; and yet it should be acknowledged that the specific circumstances under which it becomes developed do not always admit of exact demonstration. The spleen often suffers from disease in most varied forms—vascular engorgements, inflammations, malignant affections—without leukæmia showing itself ; while, on the other hand, leukæmia often is developed and passes through all its phases without morbid changes in the spleen (even simple hypertrophies) showing themselves. And the same law applies to diseases of the bony marrow, lymphatic glands, and suprarenal capsules. The various hyperplastic conditions which are from time to time associated locally with the disease, express a tendency to the development of new adenoid tissue and the formation of imperfect connective tissue, the cells of which proliferate and form circumscribed deposits in a network of delicate fibres of stiffened protoplasm. And it is curious to note that Bennett, in his first essay on leukæmia in 1845—the earliest announcement of the existence of this curious disease in this country—heads his contribution, “Two cases of disease and enlargement of the spleen in which death took place from the presence of purulent matter in the blood ;” and that Vulpian wrote “On the origin of leucocytes from pus in different forms of suppurative inflammation.”

And now the question may be asked what is the nature—what is the pathology of leukæmia ? From what has gone before it may safely be concluded that it is not a disease of the spleen, *ipso facto*, nor of the bony marrow, nor of the lymphatic glands, nor of the liver, nor of any one organ whatever. The history of blood genesis embryonic and post natal, the multiplicity and diversity of the organs which become diseased in the course of the affection, the peculiar conditions under which it is developed, and the unity of the forces displayed in its onward course, all proclaim the central fact of its constitutional character, all point to the existence of a distinct diathesis. Leukæmia then is the manifestation of a specific diathesis which is not scrophulous, nor cancerous, nor syphilitic, nor indeed identical or even very closely akin to any other known diathesis whatever—a leukæmic diathesis.

NOTES OF A CASE OF SO-CALLED SEROUS APOPLEXY.

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Serous apoplexy is a term applied to cases of fatal apoplexy, in which no lesion is discoverable in the brain, an increase of serum only being found in the ventricles, or on the surface of the brain, in explanation of the condition.

Serous effusions into the arachnoid sac are met with constantly, as a necessary result of diminution in the size of the brain, whether from general, especially senile, involution, or from partial atrophy of the brain ; and more rarely, as one symptom of general dropsy, whether dependent on disturbance of circulation or on abnormal quality of the blood. But cases occasionally are met with, to which neither of these explanations apply, in which death occurs in an apoplectiform attack, the brain exhibiting an excess of serosity in the subarachnoid space and ventricles. In such, the onset, in general, is gradual, and there may be temporary unconsciousness, limited convulsions, paralytic symptoms, partial, changeable in character and in position, with flaccidity, or the reverse, of the limbs. The condition may be gradually recovered from, or it may become more pronounced, and pass into complete coma, ending in death.

As an example of this interesting condition, the particulars of the following will be found worthy of review.

A.B., aged 62, married, a cooper, living in Newcastle, was admitted into the Infirmary, under my care, January 12th, 1886, having had an apoplectic seizure $2\frac{1}{4}$ hours previously. The attack was sudden. He fell to the ground, but did not lose his consciousness entirely.

When admitted he was found to be in a very apathetic condition, but was able to be roused. He soon relapsed into indifference. The muscles of the face were occasionally twitched, producing facial convulsions. The pupils of both eyes were contracted and were uninfluenced by a bright light.

The respirations were 14 in the minute, the inspirations were snoring in character, and the expirations were accompanied with puffing out of the cheeks. The pulse was 24 in the minute, regular, very soft, and easily compressed. The temperature was 95 deg. F.

His left arm was paralysed, both as to sensation and motion, and his left leg soon became so. Subsequently the right arm and the right leg became affected. For twelve hours after his admis-

sion the arms were flaccid, and then became rigid. Six hours later the legs became rigid.

He was prescribed a purge, consisting of sixty grains of the compound powder of jalap, and was ordered four pints of milk. Hot bottles were placed to his feet, and in the bed.

On the 13th, as the bowels had not been relieved, one drop of croton oil in butter was placed upon his tongue.

On the 14th his condition was the following :—On being roused, he answered coherently, and stated that he was not suffering pain ; but that he was unable to move his arms and legs, on account of their stiffness. His tongue was protruded straight. His facial muscles were occasionally twitched. His bowels had been freely acted upon—the faeces were passed involuntarily. The urine was retained, and was drawn off by a catheter. The urine, upon examination, was found to be of S.G. 1025, acid, and contained no albumen and no sugar.

The cardiac sounds were very feeble, no impulse was visible or perceptible to the hand. The first sound was reduplicated. The pulse was 48, the respirations 14, and the temperature 94·5 deg. F.

On the 16th the pulse was 24, the respirations 14, and the temperature 94·5 deg. F. The mouth was slightly drawn to the left side. When roused, he was conscious ; when asked to open his mouth, he did so, and protruded his tongue, but was with difficulty persuaded to draw his tongue in again and close his mouth.

On the 19th he became cyanosed, completely paralysed, and died.

The following is the record of the pulse, respirations, and temperature :—

	12th.	13th.	14th.	15th.	16th.	17th.	18th.
P....	36	40	48	36	24	18	16
R....	14	14	14	14	14	12	12
T....	95·0	94·5	94·5	94·5	94·5	94·0	94·0

Autopsy twenty-four hours after death. Permission was obtained for the examination of the head only.

Rigor mortis was present. The skin was exceedingly pale. There were no external bruises. There was no fracture of the vertex.

On removing the calvarium the membranes were seen to be

milky in appearance. The dura mater was firmly adherent to the skull cap, and was separated with difficulty.

On the surface of the brain there was no effused blood, and no excess of fluid in the arachnoid.

On the brain being sliced no haemorrhagic effusion was found.

The left lateral ventricle, also, the fifth ventricle contained an excess of serosity. The brain substance surrounding the left ventricle was slightly softer than the other portions of the brain.

The pons, medulla, and cerebellum were normal.

The arteries were calcarious. No embolus or thrombus was found.

There was no fracture of the base of the skull.

Remarks--

The symptoms, in association, are those usually described as pathognomonic of the apoplectic condition. From their character, a small central effusion of blood, basic in position, might very properly have been assumed to exist. But when the symptoms are more carefully analyzed, especially when the variable character of the paralysis is associated with the semi-consciousness and the absence of aphasia, this supposition will be deemed untenable, and the explanation of derangement of the circulation, with effusion of serosity, as more probable. This was the diagnosis of the case, that was entered during the patient's life, its correctness being verified *post mortem*.

The slowness of the pulse, in association with the alteration in the respiration and the temperature, is of great interest. If the supposition already stated be correct, viz., that the circulation was first deranged and serum subsequently effused, then the alteration in the pulse, respiration, and temperature is to be explained by impairment of the brain conduction from compression due to serous effusion.

